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IN THE UNITED STATES DISTRICT COURT
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                    FOR THE EASTERN DISTRICT OF TEXAS
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                            MARSHALL DIVISION
     TQ DELTA, LLC.,
                                     ( CAUSE NO. 2:21-CV-310-JRG
 3
                                     ) (Lead Case)
               Plaintiff,
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     vs.
     COMMSCOPE HOLDING COMPANY,
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     INC., et al.,
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               Defendants.
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                                     ( CAUSE NO. 2:21-CV-309-JRG
     TQ DELTA, LLC.,
                                     ) (Member Case)
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                Plaintiff,
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     VS.
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     NOKIA OF AMERICA CORPORATION,
     et al.,
                                       MARSHALL, TEXAS
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                                     ( JUNE 1, 2022
               Defendants.
                                     ) 9:00 A.M.
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                             MARKMAN HEARING
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                   BEFORE THE HONORABLE RODNEY GILSTRAP
                    UNITED STATES CHIEF DISTRICT JUDGE
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THE COURT: Be seated, please.

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All right. This is the time set for claim construction in a series of consolidated cases. The cases before the Court today include the lead case styled TQ Delta versus CommScope Holding Company, Inc., et al., Case No. 2:21-CV-310.

Consolidated with it as a member case is Case No. 2:21-CV-309, styled TQ Delta versus Nokia Corp, et al. And consolidated with it as a second member case is Case No. 2:21-CV-309, styled Nokia of America Corp versus Broadcom Corp, et al.

And at this time, the Court will ask for announcements on the record from the parties before we proceed to take up the disputed claim terms.

What says the Plaintiff TQ Delta?

MR. DAVIS: Good morning, Your Honor. Bo Davis on behalf of Plaintiff TQ Delta. With me at counsel table is Mr. Rudolph Fink, Mr. Christian Hurt, Mr. Pete McAndrews, and from TQ Delta we have representative, Ms. Alba Divine. And we are ready to proceed, Your Honor.

THE COURT: All right. Thank you, Mr. Davis.

What's the announcement from the CommScope Defendants?

MR. FINDLAY: Good morning, Your Honor. Eric Findlay, Doug Kline, and Andrew Ong on behalf of the CommScope Defendants. We are ready to proceed, Your Honor.

THE COURT: All right. What's the announcement from the Nokia parties?

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MR. AHNHUT: Good morning, Your Honor. Adam Ahnhut on behalf of the Nokia Defendants. And with me is Scott Stevens, John Haynes, Karlee Wroblewski, Nic Marais, Katie Donald, and Mr. Kirk Bradley, and a summer associate as well from our offices, Gina Campanelli. And we are ready to proceed. THE COURT: All right. Thank you, Mr. Ahnhut. What's the announcement from Broadcom? Do we have Broadcom represented here today, or what's that status? MR. DAVIS: I don't see Broadcom in the courtroom, Your Honor. I don't believe they're here. MR. STEVENS: That's My understanding as well. THE COURT: Okay. Has anyone failed to announce on the record that's represented here today? Okay. I'll assume not. And we'll proceed, counsel, with disputed claim terms before the Court. As you-all are already very much aware, there is a huge amount of material here. The Court has allocated three hours for claim construction, and we'll cover as much of it by way of oral argument as we can. Any disputed terms not reached for oral argument today the Court will take up and decide on the briefing and the papers. I have advised you by email as

to the order of the disputed terms and we'll follow that order

through the process this morning.

With that, let's begin with the disputed term 'transceiver'.

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Let me hear from the Plaintiff first, followed by the Defendants.

MR. FINK: Thank you, Your Honor. Rudy Fink for TQ Delta for the term 'transceiver'.

The dispute in this term is fairly narrow, Your Honor.

The parties agree the first part of the construction, the difference here is this highlighted portion which is, 'wherein the transmitter portion and the receiver portion share at least some common circuitry'.

Plaintiff's construction is the same construction that the Court in Delaware adopted. This exact same dispute was before Judge Andrews in Delaware. He resolved it in TQ Delta's favor. This term is substantially through most of the patents. I think it's in about 18 of the 22 patents that are involved in this litigation. We believe that the Delaware Court's construction was correct—transceiver is a portmanteau of a transmitter and a receiver, in the same way like a motorcycle is a portmanteau of the terms motor and bicycle.

It -- basically, a portmanteau here means something that fundamentally is both things; it's not a distinct and separate entity from both a transmitter or a receiver. And so we believe that this construction that incorporates this common sharing of circuitry captures this distinction where both

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things are combined into one at least and a nod to that as a part.

This construction is supported both by the -- extensively by the record here, a transceiver -- this is from the IEEE dictionary, I believe, or it's -- basically says it's a transmitter/receiver that uses many of same components for both-transmission and reception. This is another dictionary that says that it's -- basically it employs common circuits--here down at the bottom--or components or transmitting. Again, this is going back to that thing where it is both a transmitter and receiver; it shares those elements.

Defendants' own extrinsic evidence supports TQ Delta's construction. As part of the Court's 4-2 rule, Defendants were asked to provide or given the option of providing dictionary definitions that they contended supported their respective claim construction position. Here, as you can see, Defendants' evidence is that the -- over on the right, that the transmitter receiver uses many of the same components for both transmission and reception; again, that shared circuitry that the Delaware court's construction captured.

Similarly, their other definition is a radio transmitter/receiver that's combined into one unit, that it shares that.

They also provided a citation here to the patent, and

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that patent also then discusses shared memory, shared components that are also part of that construction. This is further reflected in the figures of the patents, just as a general matter, that here it shows from figure 1 of the '5473 and several other patents, shared components all within a transceiver as an element.

Similarly, as another figure shown in most of the other patents, the transceiver also contains a number of various different shared components.

Respectfully, Defendants' construction reads out the shared nature. In sense, it would convert the motorcycle, which is fundamentally a device that has both -- you know, that is a motorcycle that's combined in that way to something that just happens to have a motor and happens to be a bicycle. And we do not believe that this is appropriate; that the transceiver construction captures this sort of fundamental intertwining of the nature of a transceiver rather than going back to the historic separate transmitter and separate receiver.

And also we believe that it adds a tangibility that's important and helpful to the jury; that it provides a physicality of circuitry and a physicality of this connection rather than just an abstract device of some kind that's capable of. So, for instance, say your finger is capable of transmitting and receiving information, but here this is

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providing circuitry that captures that definition that's, we
believe, well-understood.
     And if there's nothing further, Your Honor, given the
number of terms, we'll move on.
          THE COURT: No, I think that's fine, Mr. Fink.
     I think at this point it would be helpful for the
Defendants to give me their version, so let me hear from the
Defendants.
                     Thank you, Your Honor.
          MR. FINK:
          MS. WROBLEWSKI: Good morning, Your Honor. Karlee
Wroblewski on behalf of Defendants.
          THE COURT: Tell me why Judge Andrews got it wrong?
Did he just rely too much on dictionaries, or what was the
problem?
          MS. WROBLEWSKI: So, yes, at the end of the day,
Judge Andrews relied on extrinsic evidence to define what we
believe has a clear plain and ordinary meaning based on the
intrinsic record.
          THE COURT: I mean, if something is a well-known
term in the art, that usually means dictionary input is
relevant. It's only when it's not well-known and understood
that dictionaries don't give you much guidance. Why would the
sources that he relied on be erroneous here?
          MS. WROBLEWSKI: So we believe that transceivers
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sometimes do include common circuitry and that does not depart

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from the dictionary definitions, but what we have here if we turn to the intrinsic record of the specification is a definition of transceivers where transceivers are generically being referred to as modems. And specifically here in columns 2, 1 through 5, we see that a modem, this generic term 'modem' includes a transmitter section for transmitting data and a receiving section for receiving data. And ultimately, while these definitions include transceivers, that would, in fact, include common circuitry, as we saw in the dictionary definitions. It's not necessarily the case that that is a requirement of what a transceiver is.

And, indeed, TQ Delta's expert agrees that this isn't always required. In the -- Doctor Cooklev's declaration, he indicated that typically a transceiver would include a transmitter portion and a receiver portion with common circuitry. But the fact that the term 'typically' here is used indicates that it's not always required. And while 'transceiver', as it's used in the patent, may involve the use of common circuitry, it does not always.

THE COURT: Your proposed construction doesn't address the common circuitry issue at all. In light of your argument that you're not saying it never does, you're just saying it may not always, why did you not propose something like what you have together with 'which may, but does not always involve some common circuitry'? I mean, was there a

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reason you left that concept out completely in your proposal, given that that's really what we're focused on and given that you're telling me some of the time it does involve common circuitry?

MS. WROBLEWSKI: I believe that would be fine. did not include that because that's not what we understand as being the plain and ordinary meaning of the term. The term 'transceiver'--'trans' involving transmitting, 'ceive' involving receiving -- so we did not include that in our proposed definition, but if we, you know, had a definition that indicated that sometimes common circuitry is involved and sometimes it isn't, I think that would be fine.

THE COURT: All right. What else do you have for me? Don't feel compelled to go through every one of your slides.

MS. WROBLEWSKI: Yeah. I only have one more, so hopefully it will be brief.

Just this slide indicates that parties have agreed in the past that the plain and ordinary meaning of 'transceiver' does -- is, in fact, consistent with the proposal that we've included here. So on the left side we see that the parties agreed in this lower paragraph that a device that transmits and receives data -- or 'transceiver' is a device that transmits and receives data. And over here on the right in Calypso Wireless versus T-Mobile, we again see that a first

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transceiver was simply defined as a combination transmitter and receiver, and is otherwise silent to whether or not a common circuitry is, in fact, required. THE COURT: All right. Thank you, counsel. Let's move to the next disputed terms 'configurable to', 'operable', and 'operable to'. Let me hear from Plaintiff first. And I'll note that it appears that the Delaware court has given some guidance here, although not directly on point and perhaps in not exactly the same context as we have here. Go ahead, Mr. Davis. MR. DAVIS: Thank you, Your Honor. Bo Davis for the Plaintiff. And yes, we have 'configurable to'/'operable to'. proposed that it means 'able to be configured'; Defendants have said 'not mere capability'. I'm showing here on this slide, Your Honor, just the I guess prevalence of this term throughout the claims. Its shows up in almost all of the families in either the 'configurable to' or 'operable to' form of the claim. And really the issue here is whether these claims are directed to capabilities or whether they are directed to capabilities of a device or whether they're directed to actual operation. And we proposed yes, they are directed to capable. Defendants have said 'not mere capability', but what they've

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also said in their brief is that the terms at issue here require actual operation. And I think that's really the part of their understanding of what 'not mere capability' is that gives us the most concern.

Words ending in 'able' typically mean 'able to be'. are directed to capabilities. If the term means 'in operation to', then what that means is -- according to the Defendants is that 'not mere capability', but that it's actually being used in a way that addresses the functionality.

And where this issue plays out throughout the course of the case is that the devices that are sold, the transceivers that are sold, whether they are on the customer side or the operator side, have functionality in them that comply with standards, the standards that are at issue in the case. And if they've got that functionality, and the Defendants are correct that these terms are directed to the operation of them, then the issue becomes, well, is that functionality -has it actually been turned on or not when it's sold. And so that obviously creates issues for infringement, it creates issues for damages, and so, you know, it's a significant term.

The Delaware court has addressed this concept of whether the claims are directed to capabilities or not in a number of different opinions, and what you'll see is that there are some earlier opinions where the court was trying to address really what does it mean for something to be capable of, and

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addressing it the way that some courts have addressed it in terms of a negative limitation that precludes a certain amount of modification.

So, in other words, if you have a device that is capable of doing something without being modified, without rewriting the code, rebuilding the hardware, then that is capable, but if the native functionality is present in the device when it's sold, regardless of whether it's -- you know, when it's turned on, whether it's turned on out of the box or turned on by the end user, then that fits within the meaning of capability.

And in one of the earlier decisions, this is from 2018, where the Court was construing the term 'plurality of bonded transceiver', so it wasn't even addressing the term 'configurable to' or 'operable to', he recognized that even in this case, Judge Andrews recognized that a plurality of bonded transceivers is directed to something that encompasses configurability. And as part of his construction, he said the transceiver is configurable to do something, and then he provided a negative limitation that doesn't require 'in operation', but what it requires is -- or what it excludes is, you know, rebuilding, recoding, redesigning any of the components in a plurality of bonded transceivers. agree with this concept of configurability that the claims are directed to that.

In family 6 in the context of summary judgment, the court

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actually did construe the words 'configurable to' and also 'configured', past tense, to say that the claims require hardware and software for performing the functionality, which addresses capability, which includes capability to a certain extent. We're not talking about any capability in the sense that anything is possible, but if there -- if it's capable to do this without rebuilding, rewriting, recompiling the code or redesigning any of the hardware or software, then that's capability.

So he essentially provided a plain meaning construction that excludes certain fundamental changes to the device, but he included functionality that's in the device natively when it's sold, regardless of whether or not it's in operation as sold.

THE COURT: What's your view as to the relation between 'operable', 'operable to', and 'capable'? Are you equating the two?

MR. DAVIS: Yes, Your Honor, we are. We're treating them all the same. We've treated them the same. Defendants have treated them the same. That's why these terms are grouped together. There's been no argument from either side that the terms should be configured differently. I believe that both terms are equally directed to and casting the net around capabilities of a device as opposed to something that, you know, must be in operation as it's sold.

THE COURT: I understand the dispute between whether it infringes sitting in the box or it has to be taken out, plugged in, turned on, so forth and so on, I understand that.

MR. DAVIS: Yes, Your Honor.

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THE COURT: But to say something is operable seems to me to be something different than saying it's merely capable of. You know, there are a lot of things that may be capable of other unintended uses, but they're operable for their intended use. I can use a rifle as a club, but it's intended to shoot a projectile.

I have some discomfort with the absolute equality that you're proposing between 'operable' and 'capable'.

MR. DAVIS: I understand, Your Honor. And we are not intending to make a distinction along the lines of the example you just provided. The issue that we're concerned with is primarily the Defendants' I guess interpretation of 'not mere capability', which is their negative limitation, to mean that the term requires that it be in operation to. And so, you know, as opposed to being operable to, able to operate in an infringing manner, that we believe is covered by the capability of the device, but we're not in a situation where we're saying that a rifle is operable as a club. That's not the situation. I mean, these devices are built for, designed for a specific purpose, a specific type of operation, and the issue -- the reason we have a claim dispute here is because

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the Defendants essentially mean by 'not mere capability' that it must actually be operating. That's really the distinction.

THE COURT: I think we're talking about two different things. My worry is that in addressing what you're concerned about we open the door to what I'm concerned about, and I'm trying to get some input as to how to draw the line here.

MR. DAVIS: Well, and, you know, one of the -- I guess one of the concepts that I think addresses the issue that Your Honor's concerned about is, is it operable to be used in the way it was designed to be used or intended to be used. So this intent aspect, I believe -- you know, that's not our concern. We believe that, you know, the devices are intended to be used a certain way.

So, you know, to the extent that that gives the Court concern, we are not proposing something that would encompass mere capability in the sense that you have a device, it's designed for a specific purpose, but you're using it for another purpose.

And again, Your Honor, in family 10, the Delaware court tried to address this issue, and I think what you're articulating is consistent with what -- the concern of the Delaware court and why the Delaware court at least articulated the issue in this way. He said that 'operable to' requires something more than 'capable of', but he didn't require that

it meant 'in operation to' in his construction.

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And in this -- the court went on to actually grant summary judgment of non-infringement, but it was in a specific circumstance where the device wasn't configured or capable of operating without modification. So, in other words, you would have had to modify the device through a command line interface, a password-protected feature, something like that.

So there are these -- there is a situation where the court did say narrower than 'capable of' but, you know, again, there's a bit of a -- I guess a disconnect or a diversion between some of what the Court has said in Delaware and statements like this, Your Honor.

Again, and I do want to point this out, we recognize that at least in the family 9 context the Delaware court did construe 'operable' to mean 'in operation to' in the context of granting summary judgment of no infringement on that patent. However, we respectfully disagree. We just don't believe that 'operable to' means 'in operation to' in the sense that out of the box the functionality must be turned on, so-to-speak.

THE COURT: What else, Mr. Davis?

MR. DAVIS: Well, Your Honor, in the Huawei case I believe you addressed a very similar issue. The term here was 'adapted' and 'configured', past tense, as opposed to 'operable to' or 'configurable to'. But even here, Your

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Honor, what you -- what the Court held was that this language isn't mere capability of performing the functions in the abstract, which I believe is like your golf club rifle In the abstract, sure, you can take a rifle and use example. it as a golf club, but that's not what it was designed to do. So we don't believe that this case holds that the claims must be construed to mean 'in operation to'.

And we have other cases from this Court, like the e-Watch case where the Court recognized that the claim at issue there, which included the language 'operable to' was -- when it used the word 'operable to', it was directed to capabilities. here the Court says, "For example, claim 1 of the '168 Patent recites, 'an image collection device being operable to provide visual image data, ' and goes on to list various other iterations of this 'operable to'. And the Court said, that language, 'operable to', is addressed to capabilities.

In the Iron Oaks case from the Federal Circuit, the same word, term, 'operable to' was at issue, operable to do something, perform a function, and the Federal Circuit agreed that -- agreed with the board in that case that a second mobile unit that is capable of creating patched operating code in some circumstances still satisfies the claim that it simply must have the capability of performing the function.

And finally, Your Honor, there is a whole slew of cases such as the Finjan case where it's not a claim construction

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issue, it's a summary judgment infringement issue, but it does stand for the general proposition that apparatus claims are directed -- when they're directed to capabilities don't require actual operation. And we believe that's the problem with their construction. We believe that's what they're advocating for -- that these claims require actual operation, and we respectfully request that the Court reject that limitation. That's all I have, Your Honor. THE COURT: All right. Thank you, counsel. Let me hear from the opposing parties. Go ahead, Mr. Stevens. MR. STEVENS: Thank you, Your Honor. Scott Stephens for Defendants. So the dispute that you just heard is actually not a dispute in this case. We're not going to say -- to Your Honor's analogy, we're not going to say that the gizmo has to be taken out of the box, plugged into a wall, and actually in operation. We've discussed through the meet and confer process that that is not what we're saying in this case. we're saying in this case is to be configured to or operable to or in operation to requires the device as shipped be able to meet those claim languages; that you can't rewrite the source code, change the hardware. I think Mr. Davis said, if I heard him correctly, that

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his construction does not incorporate rebuilding, rewriting code, redesigning the product, using a command line interface to modify the product, or given access to password-protected features. If that's all true and that's what we're going to hear consistently through the case, I'm not sure there's much of a dispute on this term.

What we are worried about is that there are certain parts of the standard that are optional; that are not actually implemented in the chip sets that we purchase or in the products that we deliver to the customer. Now, hypothetically could that decision have been different? Could the people that wrote the source code have written the source code differently and implemented it on the same chips and on the same transceivers? That's hypothetically possible, but the claim requires more than hypothetical possibility. That's what we're talking about with our limitation of 'not mere capability'.

All we're saying is that we have to look at the products as shipped, not a product that could be capable of, be redesigned, or have different source code put on it. And the concern from their construction is 'able to be configured'. 'Able to configured' to us sounds much, much broader. have a computer and it's got a memory and a processor, it's able to be configured in a plethora of ways. You could buy software from another party and put on it, you could send it

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back to the manufacturer to have something changed about it,
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     it's all able to configured that way, but --
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               THE COURT: Well, I mean, quite honestly, isn't
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      'configurable' just 'able to be configured' with the word
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     being cut in half and the front half being put on the back?
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     mean, just -- it's the same part of the language.
               MR. STEVENS:
                              It very well could be the same
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     construct, but what we believe is that that's an attempt to
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     say, No, you could ship it back and put different software on
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     it and do something different.
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               THE COURT: Let me ask you this.
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               MR. STEVENS: Yes, sir.
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               THE COURT: If the Court were to construe
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      'configurable' to 'be able to be configured', as the Plaintiff
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     requests, but make it clear that that doesn't mean it's the
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     same as being capable of anything through redesign or
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     reconfiguration or alteration, which comports with what I
     heard Mr. Davis argue, I think at that point we're back full
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     circle to where you started in that we may not have that much
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     of a disagreement here.
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               MR. STEVENS: I think that's correct, Your Honor.
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     If the construction is clear that it does not include
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     rebuilding, rewriting the code, redesigning, command line
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     interface modifications, or password protected features, then
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     I don't believe there's a dispute.
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THE COURT: Well, as I hear both of you, it sounds like you're both saying the same thing, but you don't trust each other to stay to that position and you're worried about what they're going to do after this is over.

MR. STEVENS: I think in fairness, Your Honor, I'm sure that's not the first time that's been your view, and that's probably very true. I mean, we did have this discussion, both of us, in good faith during the meet and confer process and weren't able to resolve it, so it's not entirely clear to me that there's not an issue bubbling here that is beyond my purview, but as Your Honor just phrased it, we would have no problem with that construction.

THE COURT: All right. Mr. Davis, do you have anything else to add? It's clear to me this may be one of the more pressing terms here. In light of this colloquy with Mr. Stevens, do you want to revise your earlier statement or confirm it or what would you like to add, if anything?

MR. DAVIS: I believe that I agree with Your Honor's articulation of it. I do want to clarify for the record and make it abundantly clear that, you know, the list of things that Mr. Stevens read off is not entirely accurate with the way that we -- the way that I articulated it.

And with respect to the list of things, you know, he said not rewriting code, not redesigning chips, but then he also included password protected and command line interface.

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I mentioned password protected and command line interface, I was talking about in the context of the Delaware court having granted summary judgment, so as a factual matter the court held in those cases that I don't believe that something that is inoperable is -- satisfies the definition of 'capability'.

So I just wanted to make sure that we're not on record having agreed to password protected or command line interface. There are Federal Circuit cases that address those issues as to the ultimate infringement question, which I think is ultimately where this goes, and a lot -- Your Honor is absolutely correct. The concern here is that I think both sides are afraid that the other side is going to, you know, do something that addresses the ultimate infringement question.

So I just would want to clarify that to the extent the Court is going to articulate, not as part of the construction but as part of the analysis and the opinion or something that it expects the parties to adhere to, that, you know, we're talking about, you know, redesigning, rebuilding something that is not functionality that's, you know, inherent in the machine as it's designed.

THE COURT: I understand. And I think, in very large part, both sides are in the same posture. It's clear to me you're just worried about what wiggle room the Court might leave that the other can take advantage of the down the road. And quite honestly, counsel, as Mr. Stevens pointed out, this

is not the first time I've seen that scenario. 1 MR. DAVIS: I understand. 2 THE COURT: But it's part of my job to make sure 3 that there's not any inappropriate wiggling in any room that's 4 left, and I can certainly do that. 5 6 MR. DAVIS: Thank you, Your Honor. Appreciate it. THE COURT: Okay. I think I've heard all I need to 7 on this term, unless there's somebody else that needs to weigh 8 in. 9 If not, let's turn to the next group of disputed 10 terms--'each bit in the diagnostic message is mapped to at 11 least one DMT symbol', and then we've got 'DMT symbols that 12 are mapped to one bit of the diagnostic message'. The third 13 iteration of this from claim 40 appears to have been dropped, 14 it looks like to me, and we're just talking about these first 15 16 two iterations. 17 Why don't you go ahead and give me Plaintiff's posture on this, please. 18 MR. DAVIS: Yes, Your Honor. 19 The issue here is indefiniteness. The Defendants have 2.0 21 alleged that this term is indefinite, and we obviously disagree. We have proposed a construction that is consistent 2.2 with the Delaware construction for a slightly different term. 23 The term at issue was not 'DMT symbol'; it was 'DMT signal'. 24 But we have essentially adapted it to these claims, so --25

THE COURT: Let me ask you this, counsel. 1 MR. DAVIS: Yes, Your Honor. 2 THE COURT: If -- and this is a hypothetical -- but if 3 the Court were not persuaded by the Defendants' indefiniteness 4 argument, would a construction of plain and ordinary meaning 5 be adequate here? It doesn't look like to me the Defendants 6 have come forward with any alternative construction beyond 7 positing their arguments on indefiniteness. That it need to 8 be construed as you've attempted to... 9 MR. DAVIS: I don't believe so, Your Honor. My 10 understanding is that I believe plain and ordinary meaning 11 would be sufficient. So I -- you know, I believe that's --12 THE COURT: Okay. 13 MR. DAVIS: We would agree with that. 14 THE COURT: Well, tell my why their indefiniteness 15 argument fails here. 16 17 MR. DAVIS: Yes, Your Honor. They've articulated an indefiniteness argument that 18 doesn't rise to the level of indefiniteness where, you know, 19 the term is incapable of being understood by a person of skill 2.0 21 in the art. Essentially what -- I think it would be helpful to just give a brief explanation. 2.2 What the '686 Patent is dealing with is a situation where 23 there's interference or noise in the transmission line, and it 24 wants to figure out what's going on, so it goes into a 25

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diagnostic mode so that information can be exchanged to try to fix the problem. And because there's noise, we need a more robust way of communicating the message, and the diagnostic mode is basically slowing the bandwidth down to where we're using the entire DMT symbol in the transmission to communicate a single bit of information.

And the specification of the '686 Patent talks in a number of places about this issue about needing a diagnostic mode or establishing a diagnostic link mode to be able to communicate the message in a simple and robust manner. And so that's what we're talking about and that's what this claim term, 'each bit being mapped to one or more DMT symbols' is talking about. It's talking about we're going to communicate less data in a slower fashion, but it's more robust so that it's more likely to get through.

And the Defendants have essentially said, We don't understand what this means, we don't understand the concept of mapping. And they agree that they do understand the concept to the extent that you're mapping one bit to one symbol, so they -- I think or I gather from their briefs that at least that part of the claim is understandable by them. But what they don't understand and what they think is indefinite is where you're mapping one bit to more than one symbol.

Now, the claim itself says 'one or more'. They understand at least the 'one' part of it. And I believe their

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indefiniteness argument is focused on the 'or more' part. as for disclosure in the specification for this concept of 'each bit being mapped to at least one DMT symbol', we have express disclosure in column 1 -- sorry, column 3, lines 44 to "In the diagnostic link mode, the RT modem sends diagnostic and test information in the form of a collection of information bits to the CO modem that are, for example, modulated using one bit per DMT symbol modulation as is used in the C-RATES1 message in the ITU and ANSI ADSL standards."

So the standards talk about C-RATES1, they talk about mapping one bit, they address this concept of 'only one bit of information is transmitted in each symbol'. So it seems that quite a few people of skill in the art understand this concept; they understand what it means to map a bit to a symbol.

The -- in the paragraph immediately following, there is also disclosure for the one bit per DMT symbol modulation message encoding scheme where a bit with a value of 0 is mapped to the REVERB1 signal and a bit with a value of 1 is mapped to a SEGUE1 symbol. And it talks about, Since both signals are wideband and known in advance, the receiver can easily detect them using a simple matched filter. saying, look, we're going to use a REVERB signal and a SEGUE symbol to map 1s and 0s, wideband, easy to understand.

And I think this addresses their concern or their

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indefiniteness challenge that we don't understand how you map one bit to, you know, the same bit in a message to multiple symbols. We think it's very simple and straight forward. You're just repeating the same symbol. You're repeating the same bit. And that's exactly what's disclosed in the standard with respect to REVERB1. REVERB1 is a type of signal. Each symbol of REVERB1 is identical, and the duration of C-REVERB1 is 512 repeating symbols. That sounds like mapping a single bit to more than one symbol to me. And it's disclosed in the standard that's incorporated into the spec.

This is just an example of a signal, what a signal would look like, the wave form of a DMT symbol that's been modulated, and it's just repeating. So how do you map one bit to more than one symbol? It's repeated, exactly as discussed in the REVERB signal portion of the standard.

So Defendants' argument is, Well, this is a -- 'mapped' is a jargon term. We don't understand it. It could mean that the same bit is represented by one symbol, two symbols, or every symbol that results from a given DMT signal. That's not indefiniteness. That's -- it could. fine. That's disclosed in the spec. It's disclosed with respect to the REVERB1 signal for 512 symbols.

And essentially they say a person of skill in the art would understand that you have to define a mapping function with specificity in order to understand -- for both sides of

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the transmission to be understood. That's fine. That doesn't make the term indefinite simply because both sides have to have been -- have to have a mapping function ahead of time so that they understand what's being communicated. That doesn't render the term indefinite.

And then they say, Well, the REVERB and SEGUE signals are intended -- are instead only relevant to the state of the communication protocol. That may be true in the standard, but the standard is incorporated by reference and it's incorporated into the spec as a way to communicate a diagnostic message. So the patentee, the inventor is saying, Hey, we could use something like this REVERB signal defined in the standard to communicate the diagnostic message. So the fact that the standard may use REVERB and SEGUE for a different purpose doesn't mean that the inventor can't incorporate that into his invention.

And finally, this is, again, from the declaration of Doctor McNair, and in here he's admitting that while 'one' is clear, he's admitting that at least that part of the claim is clear, mapping one bit of a message to one symbol, he says, "The term 'at least one' allows for the scenario that a given bit is mapped to more than one DMT signal. As described below, the different possible interpretations tied to each version of the claim further adds to the indefiniteness of the term."

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As I just explained with respect to REVERB, the REVERB signal, that's disclosed in the specification, the person of skill in the art would understand what is meant by that.

And, finally, their indefiniteness argument boils down to a number of questions which I don't believe satisfies the standard for indefiniteness. Just because there are questions that can be articulated doesn't mean that the term is indefinite, but I believe the answers to all -- there are answers to all of these questions that are apparent from the intrinsic record. The first question is whether there is some error coding used to map a bit into several redundant symbols. That doesn't mean the term is indefinite. Error coding is something that's understood in the art. Essentially, in its most basic form, error coding is repeating the same bit over and over again. You're creating redundancy in the message to ensure the reliability of the transmission.

The second question whether the same bit is sent multiple times, once in each symbol, yes, that is the way to do it. That is a way to do it.

Whether the claim language contemplates something else entirely. The claim is broader than that, certainly. It could encompass any error coding scheme where you're mapping each bit to at least one symbol.

With all that said, Your Honor, I don't have anything We just don't believe this term is indefinite. further.

THE COURT: All right. Thank you, counsel. 1 Let me hear responsive argument. 2 MS. WROBLEWSKI: Karlee Wroblewski on behalf of 3 Defendants. 4 THE COURT: Go ahead, counsel. 5 6 Let me ask you, before you proceed with your actual argument, if your position is that the potential need for a 7 8 mapping function makes the claim terms unclear, and I gather at least one reading of your briefing would support that, why 9 isn't that really an enablement or a lack of written 10 description issue more than an indefiniteness problem? 11 MS. WROBLEWSKI: Yes, Your Honor. 12 So I think ultimately, as counsel has pointed out, there 13 is a bit of discussion within the specification as to what is 14 required by the claim language, but there is additional 15 16 discussion that was not raised by counsel that would indicate 17 that multiple possibilities are -- could satisfy this claim language, and that's where the indefiniteness issue comes 18 from. 19 So if I may sort of point out the claim language and 2.0 indicate where in the specification that additional disclosure 21 is, that is the crux of why this is, in fact, indefinite. 2.2 THE COURT: At some point I want you to answer my 23 question, though, as to why this is truly an indefiniteness 24 issue and not really a lack of fully enabling it or possessing 25

the full scope or written description problem. 1 MS. WROBLEWSKI: Yes, Your Honor. 2 So, ultimately, I believe that the issue and why this is 3 indefinite is because looking at the claim language, it does 4 not allow one of skill in the art to understand the bounds of 5 the claim, and that's sort of the crux of the indefiniteness 6 issue. We're not of the position that there is not 7 description within the specification where one could pull 8 multiple meanings as to what this language might mean, but, 9 rather, that it's not clear which of those possible 10 interpretations might be correct, and so that's why we're 11 setting forth an indefiniteness position as opposed to a 12 written description or lack of enablement. 13 THE COURT: I mean, it's clear that the old standard 14 that used to be applied here of insolubly ambiguous is no 15 16 longer the test. 17 MS. WROBLEWSKI: Right. THE COURT: But that doesn't necessarily mean that 18 we revert to the opposite end of the spectrum where any 19 uncertainty automatically equates to indefiniteness. 2.0 MS. WROBLEWSKI: Yes, Your Honor. 21 THE COURT: You do have a clear and convincing 22 burden or standard here, so let me hear the rest of your 23 argument. 24 MS. WROBLEWSKI: Yes, Your Honor. 25

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So, specifically, as you referred to the standard, we believe that a person of ordinary skill in the art would not have reasonable certainty as to what is intended by this language. And turning to the specification, this is the same specification that TQ Delta's counsel just had up. And what TQ Delta's counsel pointed out was this disclosure as to 'one bit per DMT symbol modulation', and again here 'one bit per DMT symbol modification'.

And if I return to Plaintiff's proposed construction, they are reading this requirement into the language so that it represents only a single bit of the diagnostic message. what this doesn't consider is this additional requirement in the middle of the specification, column 3, lines 50 and at line 53, where it indicates that "other exemplary modulation techniques include, for example, higher order QAM modulation which involves more than one bit per carrier."

So this requirement that there can only be a single bit should not, in fact, be part of the claim, and this conflicting disclosure within the specification is the basis for why we believe there's not reasonable certainty as to what this claim limitation actually means.

THE COURT: All right. What else?

MS. WROBLEWSKI: Returning to our position of indefiniteness, I just want to point out that Plaintiff has proposed the same definition with respect to these two very

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different limitations, so the first limitation being, "Each bit in the diagnostic message is mapped to at least one DMT symbol and DMT symbols that are mapped to one bit of the diagnostic message."

And it's clear that based on these differing language -based on this differing language, it can't be the case that one construction solves all of the ambiguity that exists within the claim, and this differing language, in fact, raises different questions as to what is required by each of these limitations.

THE COURT: Well, if that's the case, and I don't necessarily disagree with you that it is, why did Defendants opt to stop with your indefiniteness argument and not go forward and say, And, alternatively, if the Court finds that this is not indefinite, what the Plaintiff has proposed here doesn't fit there and what he's proposed there doesn't fit here. You didn't give me any of that. You didn't go beyond just simply saying it's indefiniteness, end of story, and now you're arguing somewhat what you failed to brief, and I'm curious as to why.

MS. WROBLEWSKI: Respectfully, I do believe that we -- I do believe that our brief included at least the basis for these arguments. But, you know, to your point, if the Court is not inclined to go with an indefiniteness position, simply adopting, you know, the plain and ordinary meaning of these

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terms I think would be acceptable. Ultimately, these terms cannot be satisfied by the same construction that has been set forth by TQ Delta, and --THE COURT: Tell me in -- to carry this discussion a little further, then, tell me what your view is of what the plain and ordinary meaning should be of this claim language. MS. WROBLEWSKI: Truly, Your Honor, because of the lack of specificity of these terms, I think that what we would be left with is just the language of the claim as is and that no additional construction would be necessary and would be a factual issue we would have to deal with down the road. THE COURT: Well, let me just be real candid with you, counsel. I don't want to leave the door open to a late-breaking, end-of-the-process, most inconvenient possible raising of an 02 Micro issue. So if you've got what the plain and ordinary meaning ought to be, tell me it is now, or tell me the claim language suffices without any further construction. Don't be silent here and then down the road as we're picking the jury say, Oh, for the first time it's just dawned on me you have to construe what the plain and ordinary meaning is. So that's what I'm trying to foreclose here, to be candid with you.

MS. WROBLEWSKI: Understood, Your Honor.

And to the extent the Court is not inclined to agree with our indefiniteness, we would submit that the plain language of

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the claim here would be the plain and ordinary meaning.
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               THE COURT: All right. Anything further?
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               MS. WROBLEWSKI: No, Your Honor.
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               THE COURT: Okay. Thank you, counsel.
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          All right. Let's move on to this fourth category, 'array
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     representing frequency domain received idle channel noise
     information'.
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          Let me hear from the Plaintiff on this.
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                           Thank you, Your Honor. Bo Davis again
               MR. DAVIS:
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     for the Plaintiff.
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               THE COURT: This is one of those cases where we have
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     a prior construction from Delaware, is it not?
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               MR. DAVIS: It is, Your Honor. We have a Delaware
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     construction. We have proposed the Delaware construction, and
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     essentially the Defendants have proposed the Delaware
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     construction up to a point. The language that I --
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               THE COURT: On the 'received channel' seems to be
     where it deviates.
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               MR. DAVIS: Yes, Your Honor. They have omitted that
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     language from their construction.
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          And the Delaware court addressed this thoroughly and
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     recognized that we're not talking about a complete absence of
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     any transmission signal. Transmission signals, as the
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     specification says, are a source of the noise that we're
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     trying to address. And so when we're talking about -- I mean,
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what we're talking about here is we have a particular channel. We want to measure the amount of noise on that channel, so we're going to stop transmission on that channel, measure the noise, get the information we have about it so that we can then adjust the parameters we need to adjust to make the transmission on that channel more reliable. So we do think it's important for that reason to have the language 'on the received channel' present in the claim to distinguish the Defendants' construction, which is in the absence of a transmission signal. So I don't know that there's really a whole lot more to say about it than that, and for brevity, I'm happy to rest on that argument, unless Your Honor has a question, but I believe that's the issue. THE COURT: All right. I don't have any questions of Plaintiff at this juncture. Let me hear from Defendants. MS. WROBLEWSKI: Karlee Wroblewski again. So, respectfully, I believe there are two disputes with respect to this term, the first being the requirement of 'array', and then, as counsel pointed out, the difference between Plaintiff's construction and Defendants' construction as to whether or not 'on the received channel' is required. With respect to 'array', we think that this is a well-understood term within the art, and that adding the

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additional construction of 'ordered set of values' would just serve to add additional confusion to the jury and require additional description as to what is intended by that term. In addition, we don't feel that that fully captures what 'array' can require. THE COURT: So you think there is some divergence between the plain and ordinary meaning, the well-established meaning of 'array' and 'ordered set of values'? MS. WROBLEWSKI: Yes, Your Honor. So -- and then turning to the dispute that TQ Delta raised is with respect to 'on the received channel'. I'd first like to point out that 'on the received channel' is not anywhere within the specification. It doesn't point out that in order to measure idle channel noise information it must be that channel that is, in fact, silent. What we do see within the specification is two things: One, the language as proposed by Plaintiff and Defendants' construction requires 'the absence of a transmission signal'. And from the specification we can see that a transmission signal is one signal that goes across the entire subscriber loop. So we see that in the '686 Patent at column 1, lines 34 through 43, and again within column 2, line 1 through 11. THE COURT: Isn't there some difference between an absolute absence of a transmission signal and the channel simply being idle? I mean, those are not the same thing, are

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MS. WROBLEWSKI: They are not. And what we are measuring with respect to idle channel noise information is the noise information that would exist within a given channel, but that does not require that that channel be the only thing that is idle. So the specification further tells us that --

THE COURT: But not requiring that that's not the only thing that's idle is not the same thing as saying there's no transmission signal at all, is it?

MS. WROBLEWSKI: Well, the specification points to examples of noise that can exist on a line, and so we see here that what the specification considers is not noise that is present on adjacent channels, but as we see on line 45, the noise that is present on an adjacent phone line. And so the differentiation here is that we, based on this disclosure within the specification, understand that the claims are not so specific as to indicate that there must only be an absence of noise on the channel, but rather, that the entire line must be silent.

If we look at -- this is from TQ Delta's technology tutorial. We see the noise that can be introduced from adjacent lines here on this telephone pole, and then we have four different lines going to four different houses communicating different types of data. And these different lines are, in fact, impacting the line at issue that -- for

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which we want to evaluate what noise is, in fact, present on a given channel.

So it is our position, based on this image, that it's not necessary that to measure the idle channel noise information of a channel that it must only be the case that other channels are idle, but rather, that the entire line must be idle.

THE COURT: Let me return to your first point.

What differences are there, in your view, between the well-established understanding of an array and an ordered set of values? I'm not at all sure that I think there's a lot of difference or space here, but you seem to think it's worth making a point in argument over. So tell me what is it that 'ordered set of values' doesn't convey that is part and parcel of the well-known meaning of 'array'.

MS. WROBLEWSKI: So there's a few examples. that an array doesn't necessarily require an ordered set; rather, an array could include, for example, the array of colors in a rainbow. So it's not necessary that we have a table that allows us to pick and choose what satisfies that term and sort of an ordered pair of values.

THE COURT: Every rainbow I've ever seen looks the same way. Are you telling me there's a difference between the way they're ordered?

MS. WROBLEWSKI: Not necessarily. So it could be the case that the array of rainbows tells you them in a

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particular order, but -- sorry, the array of the colors in a
rainbow is in a particular order; but it could also be the
case that those colors are presented in a different order, but
that wouldn't necessarily mean that they are not still
representative of the colors of that rainbow.
          THE COURT: All right. Anything that you want to
cover that you haven't already, counsel?
          MS. WROBLEWSKI: No, I think that covers it, Your
Honor.
          THE COURT: Okay. Thank you.
    All right. Let's move on to 'plurality of bonded
transceivers'.
    Let me hear from the Plaintiff, please.
          MR. HURT:
                    Thank you, Your Honor. Christian Hurt
for the Plaintiff.
     This is a term that was also construed in the Delaware
case, and the main dispute between the parties --
          THE COURT: Are we back to the 'configurable'
argument again?
                     That's right, Your Honor. And it's a
          MR. HURT:
little bit different because 'configurable' is not in the
claim language. The claim language is 'bonded transceiver',
and there is a dispute over what it means to be bonded. And
the Delaware court resolved that by including language that
the transceivers are on the same side of a physical link.
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That's what it means to be bonded. But what the Defendants want on top of that is that the transceivers have to actually be running in bonded mode. They need to be running in that particular mode of operation. And that's what the Delaware court rejected, and that's the main issue that's being relitigated in this case.

And so the main issue in the actual construction is the Defendants have the word 'coordinated to', which the Delaware court referenced, and it's in the briefing as 'active bonding that's actually doing the bonding', and our construction, which is the Delaware construction, is 'configurable to'.

So that's the primary issue. That's the issue that's briefed between the parties.

And so -- and the Delaware court resolved this, and, as I mentioned, for giving meaning to the word 'bonded' found that the transceivers are on the same side of two or more physical links. And that's what it means for these transceivers to be That's the actual structure. bonded.

But what the Defendants are including here, which they included in Delaware, is not only do they need to be -- the transceivers need to be set up that way; they actually need to be running in bonded mode. And the district court in Delaware rejected that. And that's where the 'configurable to transmit' comes in instead of 'coordinated to transmit' comes in, and that was in the Delaware case.

And this is one of the --

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THE COURT: Tell me how 'coordinated' equates with actual operation. I mean, doesn't 'coordinated to' re-raise the issue of 'configured to' as opposed to actual operation? MR. HURT: Well, Your Honor, I would think if in the -- I would think Your Honor is correct in the absence of the record that's in Delaware and how this dispute played out. The Defendants proposed 'coordinated to' and in their briefing took the position that that meant actual active bonding, actual operation. And so that's the issue.

I think if we were just talking about 'coordinated to' without that context, it would be closer to what Your Honor asked, but the reason we're talking about it as 'active operation' and 'active bonding' is because that's how the Defendants have framed the issue in Delaware. And that's the language that provides the hook for that.

THE COURT: All right.

MR. HURT: And so the district court rejected that This case in Delaware actually went to a verdict, so a lot of these Delaware cases are at different stages. The jury actually rendered a verdict on this -- on these claims under that construction.

And so the Defendants, to show that it requires active operation, point to two with parts of the specification in which the Delaware court looked at, but if you look at those

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parts, it's talking about an exemplary system, it's not something that's definitional, and it says "to, for example, generate a high data rate." So it doesn't say it's actually doing it right now; it's -- in this example system it's set up to do it, which is what the Delaware court's configurable construction already captures.

The second part of the specification similarly doesn't help the Defendants' re-definition because it mentions the exemplary system being bonded together to form a single But again, the district court's -- Delaware court's stream. construction captures this because they're on the same side of the physical link, and this is actually the part of the specification that the Delaware court relied on to have two transceivers on the same side of the physical link, which is in TQ Delta's construction. So this is already captured in what it means to be bonded.

But what the Defendants are doing now, which is what they did in Delaware, is have an additional requirement that those transceivers are up and running in bonded mode, that they are actually in this operation, and the district court rejected that in Delaware. It ultimately went to a jury verdict. There is no reason to depart from that construction. Nothing in the intrinsic record would support that view.

THE COURT: All right.

MR. HURT: Unless Your Honor has any questions.

THE COURT: No. Thank you, Mr. Hurt. 1 MR. HURT: Thank you, Your Honor. 2 THE COURT: Let me hear from Defendants, please. 3 MR. ONG: Good morning, Your Honor. Andrew Ong on 4 behalf of Defendants. 5 6 These two terms, the plurality of bonded transceivers and the next term are only relevant to CommScope because these are 7 the only -- they are only asserted against CommScope. 8 So I think the key thing here to note is that what 9 Plaintiff admitted during argument is that the 'configurable 10 to' language is nowhere in the claim language. It's not 11 anywhere in the patent specification for the '881 Patent. 12 It's not used in any of the claims as issued. 13 And so if you look at the plain language of the claim, 14 you are requiring a plurality of bonded transceivers. 15 Plaintiff is asking the Court to do is essentially rewrite it 16 17 to be -- to say what they wish it said, which is something along the lines of a plurality of transceivers that are 18 capable of being bonded, or if the Court is inclined to use 19 the 'configurable to' language, that's something that they're 2.0 21 proposing that's just not in the language of the claims. And --2.2 THE COURT: So for that reason, the Delaware court 23 got it wrong. 24 MR. ONG: We do think that the Delaware court got it 25

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wrong, Your Honor, and we do think that the Delaware court's construction is contrary to the intrinsic evidence and Defendant -- excuse me -- plaintiff pointed out the portions that we cited to in our brief, and they're on the screen. So the exemplary systems and methods of this invention combine multiple physical PHY's. And this is in the summary of the invention at lines -- column 4, line 29, it says, "The exemplary system illustrated in figure 2 PHY's 160 and 170 are bonded together." So the applicants recognized in drafting the specification, in drafting the claim language, that bonding -- that having actual bonding is what's required for the claimed invention.

The last point that TQ Delta made in its brief is that the construction that we're proposing here is contrary to Federal Circuit law about what a device actually is as opposed to what the device actually does. And we disagree with that, Your Honor, for a couple of reasons. One is, again, the plain language says it's bonded, so that's telling us what the structure is. And this is no different than a situation where you have a system and you have a couple of computers and it says the computers are connected to each other. Right? is what's -- that's what's required to satisfy the claim language.

And to the extent that Defendants -- excuse me. To the extent that Plaintiff believes that this is imposing a --

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improperly imposing a use requirement, we cited the Typhoon
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     Touch versus Dell case. And basically if the specification
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     supports it and you have a structure that is defined by
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     functional language, it is not -- it is proper to include a
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     use or operation requirement in the claim construction. And
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     we submit that is the case here because the plain
     language requires that the transceivers are actually bonded to
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     satisfy the limitation.
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               THE COURT: Do you agree, counsel, that whether
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     we're going to argue about 'configurable' or 'corresponding'
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     or 'bonded' or any of this claim language, that at the end of
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     the day that really comes back to whether or not actual
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     transmission and reception is required?
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               MR. ONG:
                         That's --
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                           That's really the nut of the problem
               THE COURT:
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     here, isn't it?
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               MR. ONG:
                         That is correct, Your Honor.
               THE COURT: Okay.
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               MR. ONG: And I have nothing further on this.
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               THE COURT: Is there anything that you've given me
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     that was not presented to the court in Delaware, or is this
     basically the same argument that was presented there?
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                         I believe that's correct.
               MR. ONG:
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               THE COURT: Okay. Thank you.
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               MR. ONG:
                         Thank you, Your Honor.
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THE COURT: All right. Let's move on to item 6, which is 'reduce a difference in latency between the bonded transceivers'. And let me hear from the Plaintiff. MR. HURT: Christian Hurt for the Plaintiff, Your Honor. This term is in the same claim as the one that we just discussed, and this issue was also raised in Delaware by the -- and resolved there. And there are two issues that the parties are briefing. The first is indefiniteness. district court in Delaware addressed that, found the claims were not proven indefinite. And the second is this alternate construction which replaces the word 'reduced' --THE COURT: With 'minimize'. MR. HURT: -- with 'minimize'. THE COURT: Right. MR. HURT: And the Delaware court addressed that and concluded these are two different things. Pretty clear 'reduced' and 'minimize' aren't the same, no lexicography or disavowal. And we really have the same record here, and I'll go through it briefly, Your Honor, but this term is about using transmission parameters to reduce a difference in latency between more than one transceiver. So if Your Honor recalls

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from the tutorials, the bonded system is where you're trying to use two or more phone lines to blast a bunch of data to someone's house, and when it gets back to the house it all has to be recombined. And so if there's differences in some of the timing of when that data shows up, it may not come in order or there may be issues trying to restructure it. this term is about, Well, how about I fiddle with some of these parameters to make it so when the data comes in I can process in the way that's a little more synchronized and optimizes the system. And that's what this term just says on its face is you utilize a transmission parameter value to reduce that difference in latency.

And the district court judge on the definiteness issue in Delaware mentioned -- has held this is clear as to what this means, there is nothing ambiguous about this. And Defendants here don't point to anything in the text itself that's ambiguous. What their argument is, Well, the patent doesn't tell you how to reduce the latency, and that's not correct. And as Your Honor mentioned earlier with the family 1 patents, that's really a written description/enablement issue, not a claim scope issue.

And then the other argument is, Well, there are many times of latencies. One is configuration latency, but also another one is wire latency, which is the two wires could be of such different lengths that when the actual information

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travels on them, one's a lot slower than the other because it's a lot longer. But the signals on these wires travel at somewhere around 30 to 50 percent of the speed of light, and so there's never really an instance where Defendants have pointed to where that wire latency really has such a big impact on the system compared to configuration latency which, in the patent, is in an order of milliseconds. So we're talking about the predominant latency driver is the configuration latency. The wire latency you have to have a difference in wires that are hundreds or thousands of miles for that to even approach the configuration latency.

THE COURT: When you say 'wire latency', are you talking about what Defendants argued in their briefing as overall system latency, or is that something different.

MR. HURT: It's part of it. The overall system latency is -- has a couple of components. One is wire latency and one is configuration latency, and the total system latency is basically those start to add up.

But what the claim's talking about is you change the configuration latency parameters to reduce this difference in latency. And the Defendants say, Well, it may not reduce the difference in latency because the wire latency may be way out of whack. But there's really no evidence to support that.

And even if in that situation where you utilize the transmission parameters and it didn't reduce the latency,

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that's just a non-infringement issue; that's not a claim scope The claim scope issue is you use those parameters and it reduces the latency.

And that's what the district court judge in Delaware The claims are clear to what their face -- on their face as to what's claimed, there isn't really a definiteness issue, and there's no reason to change -- reduce the difference -- to minimize the difference.

And in terms of the argument, well, the patents -- and again, Your Honor, this is a claim that went to verdict in Delaware, so a definiteness -- the judge found there was no indefiniteness on summary judgment, the patent proceeded to trial, and there's currently a verdict.

So the specification tells you that the latency of the claims they're talking about is configuration latency, and that's what those transmission parameters drive. And I don't think there's really a dispute about that. The Defendants' alternate construction is to minimize the difference in configuration latency.

But to this definiteness argument that the specification doesn't tell you the how is just incorrect. So the specification tells you how to measure latency, how to calculate it with some equations, how to balance the two receivers to have the same latencies, and that even tells you, you know, if you can't get them -- if you can't exactly have

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them line up, you can still use some buffering to get -- to make sure that you're able to piece the stream together.

So this is actually from figure 9 where you can see the three streams coming in on the right side of the screen. The middle one is a little bit faster so you may want to hold it and wait for the top one to come in before you piece the stream back together.

And the Defendants' argument is, Well, this is talking about an embodiment that's not claimed -- I disagree with that -- but there is also a second embodiment in the patent that shows the same thing.

And so this goes to the Defendants' argument that 'reduce' means 'minimize'. Their argument is you've got to set the two latencies equal to each other, and the patent discloses, sure, that's an example equation, but it says, Look, if they're not exactly equal, which in the real world is basically usually the case, you can use some type of buffering to compensate for the difference in latency. And that's in figure 9 and figure 15 of the patents.

And Your Honor, all of this was before the Delaware judge who ruled in the way that TQ Delta is asking Your Honor to rule in this case.

THE COURT: All right.

MR. HURT: So unless Your Honor has any questions.

I think I understand your position. THE COURT:

Let me hear from the Defendants, please.

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MR. ONG: Andrew Ong for CommScope.

And just to get it out front, we -- this stuff was before judge Andrews, but we do believe he got it wrong based on the intrinsic record.

We do believe that the 'reduce the difference of latency between the bonded transceivers' term is indefinite. There is no disclosure in the patent specification that would allow a person of ordinary skill to understand what it means to reduce the configuration latency -- or reduce a difference in latency between two transceivers.

The key issue here is that in the specification there is no discussion that allows a person of ordinary skill to understand sort of what is the latency of the system before these transmission parameter values are used as compared to when you have the claim language where the -- at least one transmission parameter value is then being used to reduce a difference in latency between the transceivers.

So essentially if you don't know what the latency is before the values are used, there's no way to know whether the utilization of those transmission parameter values actually reduces a latency -- a difference in latency between the bonded transceivers.

And actually the -- with respect to the configuration latency, the portion of the specification that the Plaintiff

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was highlighting actually adds to or demonstrates the problem The only discussion of the configuration latency reducing is to set the transmission parameter values so that the configuration latency across two bonded lines are -- is the same, and that way your difference in latency is always going to be zero.

In that context--right?--you know that the difference in latency has been set to zero, but there's no discussion in the patent specification about what the difference in latency was without using those transmission parameter values. transmission -- if the difference in latency at that point is zero, then going from zero to zero, there is no reduction in the latency after using the transmission parameter values.

So the portion of the specification that I was just talking about there was the '881 Patent at column 6, lines 56 to 65.

TQ Delta points to the patent's discussion of using buffers, but as we explained in our briefing, and as TQ Delta concedes in its reply brief, the use of buffers is a different -- is a completely different embodiment than what was -- what is claimed this claim 17, 18 of the '881 Patent. And you'll see in the reply brief at page 5, they -- in the parenthetical they say, "regardless of the embodiment, understanding that it's not directed to what's being claimed."

And also using buffers as described in the patent does

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not reduce a difference in latency. There's no -- there's nothing done on the latency -- done to latency on the lines based on the use of buffers. One line is simply held up while waiting for data on the other line to arrive, and so the latency on the lines is not affected at all. So given that, we still believe that a person of ordinary skill in the art would not be able to understand what a reduction in the difference in latency is between two bonded transceivers. THE COURT: If you look at the specification of the '881 Patent here, particularly the description at column 6, lines 10 through 15, doesn't that really provide a context for understanding latency in this patent? Are you telling me that the specification just leaves you uninformed as to the concept of latency and a reduction that would follow? So column 6, lines 10 to 16, that's just MR. ONG: describing what configuration latency is and what transmission parameter values can be used to affect configuration latency. THE COURT: Isn't part of your indefiniteness argument that a person of ordinary skill couldn't read this and know what to do? Doesn't this impart a pretty clear understanding of 'configuration latency'? Well, it's not the -- our indefiniteness MR. ONG: argument is not based on the understanding of 'configuration

latency'; it's determining the difference between -- or

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whether there is a reduction in the difference in 'configuration latency', and that's the issue, because --THE COURT: I mean, you have to understand the concept of 'configuration latency' before you get to an ability to understand the reduction issue. Right? I mean, we're not talking about just what does it mean to reduce something, are we? MR. ONG: Right. So I think -- having an understanding of what 'configuration latency' is is not sufficient to arrive at understanding what it means to reduce a difference in configuration latency, because there's no -- again, back to -- there's no --THE COURT: I'm not saying that understanding 'configuration latency' in and of itself answers the entirety of the issue; I'm just saying it's part of how you get there. And doesn't the specification give you that in this column 6, lines 10 through 15, understanding that there's more to meeting the claim language than merely understanding 'configuration latency'? MR. ONG: I think I can agree with Your Honor that column 6, lines 10 to 16, does give a person of ordinary skill an understanding of what 'configuration latency' is. THE COURT: Okay. That was really the point I was trying to make. And I concede that's not the entirety of the inquiry.

MR. ONG: Okay. I apologize, Your Honor. 1 I think that's all I have, unless you have any further 2 questions on that term. 3 THE COURT: Let's talk a minute about your 4 alternative here. Tell me why 'minimize' is appropriate over 5 6 'reduce'. MR. ONG: 7 Sure. Sorry. With respect to 'minimize', I think that goes back to the 8 sole disclosure in the patent relating to what they say is 9 reducing the difference in latency for the configuration 10 latency, and that goes to setting the transmission parameter 11 values so that the configuration latency is the same on both 12 lines. 13 And because you're basically setting it to zero, that's 14 why we believe that 'minimize' is a proper term, because 15 otherwise, your -- it kind of goes back to the issue of you 16 17 still don't know whether there is a reduction as opposed to if you use the term 'minimize', then you are able to then -- then 18 this disclosure kind of explains what that is. 19 THE COURT: Are you telling me that setting it to 2.0 zero is the only way you can do it; therefore, it's always got 21 to be set to zero; therefore, it's always got to be absolutely 2.2 minimized? Is that the argument? 23 MR. ONG: As disclosed in the patent, yes. 24 Okay. All right. THE COURT: What else? 25

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MR. ONG: Nothing further on that term, Your Honor.
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     Thank you.
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               THE COURT: Okay. Thank you.
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          All right. Let me ask you this, counsel. Item 7 here,
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     hasn't this really already been covered? Do we need to argue
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     this separately before we go on to 'shared memory'; the 'each
     bonded transceiver utilizing/selecting at least one
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     transmission parameter to reduce a difference in latency
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     between the bonded transceivers'? I mean, didn't we just
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     cover that, in essence.
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               MR. HURT: Yes. Christian Hurt for the Plaintiff.
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          Yes, Your Honor, those two terms were briefed together,
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     argued together. There's no separate argument, at least from
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     Plaintiff's view, between the two -- what is item 6 in the 4-3
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     chart and item 7 in the 4-3 chart.
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               THE COURT: Do you agree with that, Mr. Ong?
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               MR. ONG: We do, Your Honor.
               THE COURT: Okay. Then let's move on, in light of
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     that, to 'shared memory'/'sharing the memory'/'a memory
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     wherein the memory is operable to be shared.'
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          Let's start with Plaintiff.
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               MR. McANDREWS: Good morning, Your Honor.
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     McAndrews for Plaintiff.
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               THE COURT: Go ahead, counsel.
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                               So the dispute with 'shared memory'
               MR. McANDREWS:
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is TQ Delta wants to stick with the construction that was provided in Delaware. Defendants want to go with plain and ordinary. And the reason for that is because there's two types of what they would potentially call shared memory that are inconsistent with the usage of the term in the patent specification and in the claims.

So the claims speak to allocating memory. I'm sorry. The claims speak to 'allocating shared memory between an interleaver function and a deinterleaver function'. construction that Judge Andrews provided was 'common memory used by at least two functions where a portion of the memory can be used by either one of the functions'.

And what this construction does is it eliminates two other types of memory that the Defendants we believe would like to call shared memory. One of them is -- and it's best to look at figure 1 of the patent just for a baseline here. So in figure 1, it shows a shared memory element 120 that sits between the transmitter portion that has interleavers in it and the receiver portion that has deinterleavers in it. is a single transceiver, so it transmits information outward and it receives information inward; it interleaves for data leaving the device; it deinterleaves for data entering the device.

So one of the types of memory that they'd like to call shared memory is something called interprocess memory where

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what it would require is the deinterleaver and interleaver of the same device are using this memory block to pass information to each other. And, of course, that doesn't make This transceiver is communicating with a device on any sense. the other end of the line, so it doesn't make any sense for the interleaver to be communicating through the shared memory with a deinterleaver. So that's one thing that Judge Andrews' construction eliminates.

The other thing that Judge Andrews' construction eliminates is merely having a common pool of memory where some portion of it is used for the interleaver and another portion is used for the deinterleaver, but those can never cross over; you can never -- you have a hard line -- yes, it's a common pool of memory, but there's a hard line where a particular portion of that memory will only ever be used for one function, like the interleaver, and the other portion will only ever be used for the deinterleaver.

The reason why we know that that's inconsistent with the specification, Your Honor, and it's actually best illustrated by the examples provided in column 6, 7, and 8 of the patent, and so it's describing a common pool of memory of the amount of 20 kilobytes, and then it gives examples of different types of allocations. In one allocation, one latency path, so the interleaver, for example, is using 16 kilobytes of memory of the 20; the other latency path, the deinterleaver, for

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example, is using four kilobytes, and so we've got a 16/4 split within the 20 kilobytes of memory. That's example 1.

Example 3 describes where, instead, you have one latency path is 10 kilobytes and the other latency path is 10 kilobytes, you still have a total of 20, but now six of the kilobytes of memory that were once used for the interleaver are now being used for the deinterleaver. And so the concept is you have this flexible memory that allows some portion of it to be used for one function at one time and a different function at another time.

There's actually -- while it's not describing this, one way to think of how prior art would have worked is in column 8, around line 15, it's describing three latency paths, so perhaps two interleavers and a deinterleaver, and it's saying each of them could be a maximum of 16 big, 16 in size.

In the prior art when you had -- even if you had a common pool of memory, those would -- there would be a hard line dividing them, so you would need 48 kilobytes of memory. You've got 16, 16, and 16. But what this is saying is that's the maximum I can use for any particular latency path, but then it gives a third -- I'm sorry. It gives an additional restriction and says, Well, I only have a 20 of total shared memory, so now we've got to figure out how to divide that up. So we can use 20, but we can't use the full maximum on any particular latency path.

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So these examples are illustrating the idea of common memory, but common memory where some portion of it is -- can be used for interleaving at one time and deinterleaving at another time.

THE COURT: Does 'can be used for interleaving at one time and can be used for deinterleaving at another time' necessarily equate to 'at some time must be used'? does the ability to use this flexible memory, it's -- does it mean that over time it will necessarily have to be used in both functions?

Your Honor, it does not mean that. MR. McANDREWS: It would mean that you have hardware set up, so, first of all, that the memory hardware is accessible by both the interleaver and deinterleaver functions, so that would be one thing that is a requirement for it to be capable of or that it can do The other thing is the way the source code is written is the source code could take that common block of memory and decide ahead of time, I'm going to divide it so no function can ever step over the other guy's line. You know, the example would be I divide a 20 kilobyte memory into ahead of time so it is always 10 for one function, 10 for another function. That would be a situation where 'can' doesn't work. The source code itself set up that memory so that you can't step over the line into the other space.

But if the source code allows flexibility in assigning

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portions of the memory to the interleaver and the
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     deinterleaver, and we intend to show that through our
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     infringement proofs, that would be a capability -- that would
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     be the capability of allocating one portion to the interleaver
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     at one time and allocating that same portion to the
     deinterleaver at another time. It doesn't --
               THE COURT: I understand that. But I guess what I'm
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     trying to get you to address for me is your understanding of
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     the Delaware construction of memory can be used doesn't
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     involve or include the concept that over time it eventually
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               It doesn't have to be; it just can be.
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     must be.
               MR. McANDREWS:
                                That's correct, Your Honor.
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               THE COURT: Okay.
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               MR. McANDREWS: So if the device would infringe as
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     sold as opposed to you'd have to observe it during the course
     of its actual use by a particular customer.
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               THE COURT: Okay. That's what I wanted you to touch
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     on.
          What else here?
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               MR. McANDREWS: I think that's it for Plaintiff for
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     now, Your Honor.
               THE COURT: And you're not proposing anything
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     different for these claim terms that were not previously
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     construed in Delaware; you're just effectively saying it's all
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     subsumed by the one construction?
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That's correct, Your Honor. MR. McANDREWS: I mean, possibly, you know, adjusting obviously for the context, but 'shared memory', 'sharing memory', 'configured to be shared', 'operable to be shared', they all are the same concept of a portion of the memory can be used for the interleaver at one time and the deinterleaver at another time. THE COURT: All right. Thank you, counsel. Let me hear from Defendants, please. MR. MARAIS: Thank you, Your Honor. Nic Marais on behalf of Defendants. THE COURT: Please proceed. MR. MARAIS: Thank you. As an initial matter, I just want to point out --And if I can please switch to the elmo. So what TQ Delta seems to be arguing in this case is the notion that a shared memory here, or at least their construction of a shared memory encapsulates all shared The one thing I just want to point out is that is memories. not how the Delaware court construed this term. If we look down here, we can see that the Delaware court indicated that the Plaintiff points to two different types of shared memory, and those are the types that Mr. McAndrews pointed to earlier, that are unlike the shared memory described in the patents. And what it ultimately concluded is, based on those two different types it said over here, What

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we're going to do is we're going to adopt this language -- the common memory can be used by either one of those functions.

So while we are -- Your Honor's point that 'can be' doesn't necessarily require, that does make us a lot more comfortable with their position that they are not necessarily requiring that a portion of the memory -- or at least that there's ever a second allocation that actually shows a single portion of the memory or a single block of memory being allocated to two different portions, we still believe what TQ Delta is trying to get at is they are reading out two embodiments of a shared memory, and -- at least a shared memory that a person of ordinary skill would understand a shared memory to be.

Now, where we think the Delaware court erred, Your Honor --

Do you mind, can we please switch back here?

Is we think the Delaware court erred by importing a limitation of the claims that is not in every single claim, and that really just describes a particular use case of a shared memory. And they are importing that limitation into every single time you see the term 'shared memory'.

So what I have up here on the slide, Your Honor, is a claim 9 of '882 Patent. And we can see it says 'shared memory' a number of times. And then we have the '608 Patent, claim 2, which is part of the same family, and here we see at

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the top it says 'a memory is operable to be shared'. So again, that's just the same term as 'shared memory', and the parties agree that that's -- those terms are being construed consistently.

But what that term ultimately does -- or what this claim ultimately does is it goes on to explain how that sharing actually happens. And it says here, "The sharing comprises using a first portion of the memory for the interleaver function and simultaneously using a second portion of the memory different than that for the first portion for the deinterleaver function." And then, importantly, it goes on and says, "and the first and second portions of the memory are configurable such that one or more bytes of the memory can be used by the interleaver function at one particular time, and the same one or more bytes of the memory can be used by the

And so it's our view is that everything that's underlined in red there, Your Honor, aligns with a second clause of TQ Delta's construction, which is where a portion of the memory can be used by either one of those functions. And every time you see 'shared memory' in claims like the '882 Patent--it's also in a number of other patents--it does -- that does not include this limitation. What we understand TQ Delta to be trying to do is import this entire limitation into that.

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THE COURT: And is that to avoid some prior art? What's the rationale behind it? Usually that's what's behind it when the plaintiff tries to import a limitation, as opposed to defendant who's trying to avoid infringement. MR. MARAIS: That's exactly right, Your Honor. And if we can switch back to the elmo. So sideways is a little tricky here. If you look here -so starting from 'second' at the bottom of the page here, it says, "Second, and Plaintiff notes that yet another type of shared memory, known as ping-pang memory both involves transmission in a single direction and uses a shared memory exclusively for an interleaver or for a deinterleaver at any one time." Now, this ping-pang memory is a term that comes directly out of one of our prior art references, Your Honor, and often it's actually referred to as ping-pong memory, so we know it comes out of that reference because it's one of the few references that would refer to as ping pang instead. And what the court ultimately did in the claim construction is it effectively read out this prior art reference by narrowing the claim language. THE COURT: Okay. What else? MR. MARAIS: So the only other thing I would add, Your Honor, is that ultimately the --Well, let me switch back.

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Ultimately we agree that a shared memory is, you know, a memory that would be used by two or more functions, but ultimately it just has to have the ability to allocate that memory amongst those different functions. It doesn't have to It doesn't ever have to have a second allocation of that memory. It doesn't ever have to -- even if it does have a second allocation of that memory, a single particular block of that memory does not necessarily have to service as two functions. You can have an allocation, as Mr. Hurt was talking about, or -- I apologize -- as Mr. McAndrews talks about the example where you have 16 bites and four bytes, there could be an allocation that re-allocates to 12 bytes and two bytes. A portion or a single block of that memory would never have overlapped between those functions, but it wouldn't changing the fact that it's still a shared memory.

I have nothing further, Your Honor.

THE COURT: Okay. Thank you.

All right. Let's go on to the next area of dispute including 'wherein the generated message indicates how the memory has been allocated between the first deinterleaving function and the second deinterleaving function', as well as 'a message indicating how the shared memory is to be used by the interleaver or the deinterleaver'.

I'll hear from Plaintiff, Mr. Davis.

MR. DAVIS: Thank you, Your Honor.

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Just to set the stage for this term, this is a situation where we are proposing plain and ordinary meaning. Defendants have adopted a construction from Delaware, but the way that this construction was situated or developed is with respect to a different term. And so we're essentially taking the court's construction of the amount of memory portion of this -- portion of this -- of the Defendants' construction was in Delaware, but it came as a result of a different claim that actually used the words 'amount of memory' in the claim.

And so we're proposing plain meaning because we think the claim language is clear. It says, "Wherein the generated message indicates how the memory has been allocated." We think that's clear. We don't think we need a construction. This claim language does not include the words 'amount of memory'.

And so -- and as you'll see on the next slide here, 'amount of memory' was actually a term that was construed in Delaware in a claim that uses the language 'amount to memory'. So we have a different claim that doesn't use the 'amount of memory'; it just says 'message indicates how the memory'.

So in Delaware, claim 5 of the '890 Patent, which is not asserted in this case, actually uses the word 'amount of memory'. And so there was a big dispute and a lot of briefing about what does 'amount of memory' mean, and ultimately in Delaware for that term 'amount of memory', we had proposed 'a

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number of units of memory', defendants proposed 'number of bytes of memory', and the Court said plain meaning. 'amount of memory', the Court said plain meaning, and expressly rejected this notion that the amount of memory for that claim was limited to a number of bytes. The term is broader than 'bytes', and a jury will not have trouble deciding what is or is not an amount of memory.

The claim here, as you can see, doesn't use the word 'amount of memory'. The term here 'wherein the generated message indicates how' the memory has been allocated but doesn't limit it to an amount.

And so, you know, I imagine you'll hear from Defendants that the -- you know, the construction that they have proposed is a construction that the Delaware court adopted, but it's a lot more complicated than that, because 'amount of memory' was the term at issue. The court went plain meaning. for the term at issue here 'wherein the generated message indicates how', those issues kind of bled over and we ended up proposing a construction in Delaware that did use the word 'the amount', and the court adopted our construction. But because of -- it wasn't -- in our view, the reason for that is not because plain meaning wouldn't have sufficed; it's because the initial issue started with what does it mean for an amount to be -- what does an amount of memory mean.

And so we're in a situation here where 'amount of memory'

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was construed in Delaware to mean plain meaning. Defendants have proposed 'amount of memory' in a claim term that says the message simply indicates how the memory has been allocated.

So we don't think it's the exact same issue, we don't think that the words 'amount of memory' are necessary to explain claim language as simple and straight forward as the claim language we have here. And so for those reasons we have proposed plain and ordinary meaning for this term, and we just don't believe that these terms need to be construed at all. We think they're plain on their face, and the Defendants' proposed construction for 'amount of memory' is simply -- it's too limiting, for one, and it's not necessary for these terms.

And that's all I have, Your Honor.

THE COURT: All right. Let me ask a question.

Yes, Your Honor. MR. DAVIS:

THE COURT: It seems that in what's been put forward, the Defendants agree not to assert that the meaning of this claim language is limited to indicating a number of bytes of memory. That's not -- if that's true, that's not enough to address your concerns?

MR. DAVIS: I believe it partially addresses our concerns. The issue, though, is still they're importing this notion that there must be an amount, an amount of memory. And so while they're saying they're not going to argue that that means a number of bytes, they're still going to argue

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something about an amount, some proxy for that. And that's our concern is that whatever they're going to argue about the amount that the message doesn't expressly -- they don't infringe because the message in their systems doesn't specify an amount of memory, that that will still be problematic in this case with the claims we have asserted here because the claim is not limited to an amount. It says the message merely has to indicate how the memory has been allocated, and it's not limited to indicating how the memory has been allocated by way of an amount. THE COURT: Well, how do you -- as a practical matter, how do you allocate memory without discussing the amount of memory that is allocated? I mean, if the total is 12 and you say six on one side, six on the other, you've said how to do it, but you've also indicated some quantity or amount. Or if it's four on one side and eight on the other or two on one side and 10 on the other. If you're going to fully enumerate the how, how do you do that and avoid the amount issue? MR. DAVIS: Well, there will always be an amount involved. THE COURT: Agreed. MR. DAVIS: So I agree with you there. The question is, does the message have to indicate the amount? Does it have to state the amount, or can it be -- can the amount be

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indicated in some other fashion; can it be indicated through -- I mean, in the way the systems work, whatever mechanism they're using to indicate how to allocate memory, it may not be expressed in an amount.

THE COURT: Well, I guess my question is, when you look at the language 'wherein the generated message indicates how the memory has been allocated', how do you do that and avoid covering, to some extent, the amount, given that there is an amount that will be employed? I mean, are you talking about some kind of fractional differentiation, half here, half there; third here, two thirds there; but you haven't identified a precise number of bytes, even though the amount of memory is going to be a known quantity?

MR. DAVIS: Correct.

I'm just not sure how you meet the claim THE COURT: language and avoid the concept of an amount.

MR. DAVIS: Well, I think that Your Honor just provided one example. It could be expressed as a fraction, it could be expressed as a percentage, it could be expressed as some indication relative to speed, the speed of the transmissions. We want to make sure that we're operating within certain parameters, and in order to do so we have to allocate certain memory, certain amounts of memory.

So yes, the -- and I do believe that, you know, the Defendants' construction, even the word 'indicates' provides some breadth there to give us some flexibility.

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And, you know, this is what the Delaware court went with. And I don't believe that their construction actually limits it to a specific number of bytes or a specific amount. In other words, it does provide flexibility to convey memory allocation in other ways, such as fractions or percentages or operating within certain parameters.

But at the end of the day, we're dealing with different claim language that merely requires that the message indicate how the memory has been allocated. It doesn't say 'indicate the amount of memory that has been allocated'. And so we're importing a limitation that's just not in the claims.

And as far as I understand Defendants' argument, they're primarily just relying on Delaware saying, This is what they did in Delaware, this is analogous to a different claim where the Defendants -- analogous to an issue where Plaintiffs proposed this. So we're in a situation where they haven't really articulated any reason for why 'amount of memory' needs to be in the claim, and the claim language itself is broader; it simply says indicate how.

THE COURT: Let me ask you another question. Claim 9, as construed by the Delaware court, does adopt this concept of the amount of memory, and my understanding of that process in Delaware was that it was driven by the presence of the word 'allocated' in the claim language. Claim 10 here doesn't

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use the word 'allocated', or any variation thereof. Defendants take the position here that, nonetheless, the plain and ordinary meaning of the language in claim 10 also encapsulates the concept of amount of memory. You've told me it ought to be plain and ordinary meaning in both cases. It looks like to me there may be a difference here on claim 10 between what Plaintiff views as the plain and ordinary meaning and what Defendant views as the plain and ordinary meaning. Comment for me on the propriety or impropriety of incorporating the concept of 'amount of memory' in the plain and ordinary meaning of the disputed language in claim 10, understanding that claim 10 doesn't have the operative 'allocate' or 'allocated', as claim 9 does. MR. DAVIS: Absolutely, Your Honor. And I believe --THE COURT: I hope that was a clear question. MR. DAVIS: I think I understand. I think I understand your question. And if I could briefly summarize it just to make sure, I think you're saying, you know, claim 9 uses the word 'allocated'; claim 10 doesn't; and is there a difference with respect to whether or not the 'amount of memory' should be in the construction of either or both of these terms. We have treated them the same. We've grouped them

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I believe Defendants, at least in their briefing together. did the same. I don't know if they'll agree with it today or whether they'll offer up a different construction for claim 10, but we don't believe that the issue of the amount of memory in the message has to be -- is really driven by the fact that claim 9 uses 'allocated' and claim 10 does not. just don't -- I don't think that that really speaks to the issue of should the construction -- should there be a construction that requires the message to indicate the 'amount of memory'.

THE COURT: It seemed to me--and I may be wrong--it seemed to me that the process in Delaware was, at least to some extent, driven by that difference, and that the concept of 'allocating' in claim 9 is, at least to some extent, the support found by the Delaware court for the use of the 'amount of memory' language in its construction. And if that analysis after the fact on my part is correct, then the absence of the word 'allocated' in claim 10 would seem to indicate maybe a different result. But I want you, and I'm going to ask Defendants, to give me their view on that issue.

MR. DAVIS: Yes, Your Honor. I think that is true. And to some extent, I mean, the Delaware -- the way the Delaware construction process unfolded for this term, again, I think it was largely driven by the fact that in claim 1 of the '890 Patent there was a term 'amount of memory', and by the

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time we got to the 'wherein' clause here for -- in Delaware that's also at issue here, the Plaintiff had proposed a construction that did indicate an amount. And that may have been driven by this allocation feature.

I don't believe that for us it necessarily drives the dispute here, because we're simply saying -- we don't necessarily think the Delaware construction was incorrect; we just don't believe that a phrase like 'wherein the generated message indicates how the memory has been allocated' really needs a construction, and the fact that Defendants want to propose an 'amount of memory' is just not necessary. So I guess that's a long way of answering --

THE COURT: The last thing I want to do is say, You're both right, it's plain and ordinary meaning, nothing else is needed, and then down the road Defendants say, Well, that plain and ordinary meaning must include the concept of an amount of memory, and you say it must not, and then we're back to the proverbial 02 Micro conundrum I'm trying to avoid.

MR. DAVIS: And I understand. I understand, Your And, I mean, the claim language itself -- under -- you know, built into the concept of indicating how memory is allocated necessarily results in an amount. The question is does the message itself have to specifically indicate the amount in some unit versus some other way.

And I guess that's where, again, we don't -- we don't

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necessarily disagree with the Delaware court's construction or
this -- the fact that the message does indicate the amount.
It's really a situation where the claim says how the message
must indicate how the memory has been allocated. We've got
additional language in here that it -- that's just not
necessary, and appears to be limiting the claims.
     And even with Defendants' admission or concession in
their response brief that they're not going to argue that it
requires the number of bytes, we still think that there's some
other issue there with respect to how they're reading that
term. And they haven't expressed it -- they haven't
articulated what that is; they just say we want a construction
that indicates the amount. And so we really just don't know
what they mean by that.
          THE COURT: It sounds like there's a lack of trust
here, counsel.
          MR. DAVIS:
                     Your Honor, I admit there may be.
                      All right. Anything further, Mr. Davis?
          THE COURT:
          MR. DAVIS:
                      No, Your Honor.
                     Let me hear from Defendants.
          THE COURT:
                      Thank you, Your Honor. Nic Marais on
          MR. MARAIS:
behalf of Defendants.
          THE COURT: Please proceed.
          MR. MARAIS: I'll address your question first, Your
Honor, and that is, is there a difference between these two
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terms -- the wherein the generated message indicates how the memory has been allocated between the interleaving function and the deinterleaving function a message indicating how the shared memory is to be used by the interleaver or the deinterleaver.

And I absolutely agree with you, Your Honor, that the hook for the Delaware court was the term 'allocated'. The -where we would push back on that is that ultimately what we're looking at here are -- is the language 'how the memory has been allocated' and comparing that to 'how the shared memory is to be used'.

And if you look to the specification, which is where the Delaware court looked to understand how the memory has been allocated, every time an allocation is talked about in the specification, or every time the specification talks about how the memory has been allocated, in the same way every time the specification talks about how the shared memory is to be used it talks about an amount. And so when you're reading this claim language in the context of the specification and applying some level of lexicography here, the specification tells us that the only way this is actually being considered is when it's talking about an amount of memory that's being allocated.

THE COURT: Well, if 'allocated' is the hook, as you say, for the court in Delaware arriving at the construction

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that implements the concept of 'amount of memory', why is that missing hook in claim 10 still going to give you a plain and ordinary meaning that continues to carry forward the concept of 'amount of memory'? Because that's what you're telling me the plain and ordinary meaning of the claim 10 language is, but to use your own language, it's missing the hook.

MR. MARAIS: So what I would say to that, Your
Honor, is I don't agree that it's missing the hook; I agree
that it's missing the allocation hook that the Delaware court
relied on. The hook here for that language is the term used
'used'. And so here we have 'how the memory is to be used',
'how the memory has been allocated'. The specification treats
those terms -- or treats as uses consistently. And so the
hook for that language would just be 'used'.

And if we go to some of the language in the specification, I won't walk through every single example here, but every time it talks about how the memory has been allocated or how the memory is being used, it's talking about an allocation of an amount of memory. So for the first example, it talks about 16 kilobytes of memory for the interleaver. The second example, 16 kilobytes of interleaver memory at the transmitter or deinterleaver memory at the receiver. There is not other language in the specification that would -- you would look to and say, Okay, well, that could maybe mean how memory is being used versus how memory is

being allocated.

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So, respectfully, I would just say that those -- while the Delaware court relied on that hook, the same hook exists in claim 10 and it's just the term 'used'.

And another point I would point out is that what this claim language requires is a message, and it's that message that's indicating how the memory has been allocated and the message that indicates how the memory is to be used. And as Your Honor pointed out, when you're looking at or considering what that message is actually doing, we have two the transceivers, the remote transceiver and the office transceiver, VTUR and VTUO, and they are communicating during initialization. That's what the patent specification's contemplating here. And in that initialization procedure, there is a message that's communicated. And if we look to figure 2 of the patent, that message may indicate 'allocating the shared interleaver and deinterleaver memory'.

Now, it would make sense to consider when you're looking at what the message is actually allocate -- or what the message is actually indicating, that it would be an amount of memory so that these transceivers know how to set up and configure their settings.

THE COURT: All right.

MR. MARAIS: The final point I'll make, Your Honor, is just one thing that Mr. Davis said that I disagree with is

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where he said he disagrees that the claim language is the
same, and what he did was he pointed to the claim at issue in
the Delaware court and he points to a limitation that we're
not asking this Court to construe. He pointed to a limitation
that said the 'amount of memory' and -- but that's
just -- it's not at issue here. What we're looking at here is
a term that TQ Delta proposed to the Delaware court and that
the Delaware court adopted in its entirety. And so for that
reason we believe that TQ Delta is actually estopped for
arguing for a term, at least as to this first term, the 'how
the memory has been allocated' term, we believe that they are
estopped from arguing for a different construction because
it's a position they affirmatively put forth and that the
Delaware court relied on and ultimately adopted.
          THE COURT: And that estops them in this Court, or
does it estop them from taking a different position at a later
time in the Delaware court?
          MR. MARAIS: Your Honor, we believe that it estops
them from taking a different position just generally. So --
          THE COURT: Anywhere.
          MR. MARAIS: Anywhere; yes, Your Honor.
                                                   That's
right.
          THE COURT: All right. Well, do you have anything
else for me?
          MR. MARAIS: Nothing further, Your Honor.
                                                     Thank
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     you.
               THE COURT: Okay.
                                   Thank you.
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          Let's turn to the next disputed term or claim language
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      'specifying a maximum number of bytes of memory that are
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     available to be allocated to an interleaver/deinterleaver'.
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          Let me hear from the Plaintiff.
               MR. DAVIS: Thank you, Your Honor. Bo Davis on
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     behalf of the Plaintiff.
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               THE COURT: Can I get your take on one issue that
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     came to mind before I hear your argument, and that is, do you
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     agree, Mr. Davis -- and I'll ask the Defendants the same thing
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     when it's their term--but do you agree that it's the message
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     that specifies; not something else?
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               MR. DAVIS: For this term, Your Honor?
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               THE COURT:
                           For this term.
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               MR. DAVIS:
                           Yes, Your Honor.
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               THE COURT:
                            Okay. Now go ahead and tell me why
     plain and ordinary meaning without any construction is
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     appropriate here.
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               MR. DAVIS: Well, I guess as an initial matter, Your
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     Honor, I just want to point out that, you know, we believe
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     this term was actually agreed to, and we were a little
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     surprised in the response brief when we received Defendants'
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     argument about it.
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          The 'specifying a maximum number of bytes of memory that
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are available to be allocated', the term itself already has
the language that the Defendants are proposing for
construction. Their construction is where the message must
specify a maximum number of bytes. Well, the only difference
between their construction and the claim language is they've
inserted the word 'must' ahead of 'specifying'. I don't know
what they mean by that or what their -- why they think there's
a claim scope dispute. I -- frankly, it's just confusing.
don't really understand their position.
    And again, it wasn't really briefed because up until the
-- you know, up until our opening brief, this was the state of
play with respect to this term. It was plain and ordinary
meaning. And so I'm just -- I don't know exactly what they
mean, so I'm a little bit at a loss as to how to respond to
what their construction actually adds or what the claim scope
dispute is here. But --
          THE COURT: Let's do this, then.
          MR. DAVIS:
                     Yes, Your Honor.
          THE COURT: Let he hear from Mr. Stevens, and then
after he's given me that explanation and along with other
argument I'll let you have a shot at it.
          MR. DAVIS: Thank you, Your Honor.
          MR. STEVENS: So the answer to your question is yes.
          THE COURT: Okay.
          MR. STEVENS:
                        The message must specify.
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THE COURT: Or it is the message that specifies? 1 MR. STEVENS: Yes, sir. 2 THE COURT: Okay. 3 MR. STEVENS: So I think the dispute here, Your 4 Honor -- you brought up not wanting an 02 Micro fight later on 5 6 in this case, and that's why we're raising this now, to put everyone on notice that we think there is a lurking fight here 7 about this particular construction and what it means and what 8 it doesn't mean. 9 It's absolutely right that our construction is simply the 10 words of the claim. You know, we think that must happen. 11 Ιf all parties agree that the message must specify a maximum 12 number of bytes of memory, if we're all on the same page that 13 the message must say something like max bytes equals 20, no 14 fight at all. But I urge, Your Honor, that that's not going 15 16 to be the case here in a couple of months; that there's going 17 to be a different construction brought to you when we get a little bit further in the case. 18 Now, if they're willing --19 THE COURT: What's your crystal ball tell you that 2.0 that future construction from the Plaintiffs is going to be? 21 MR. STEVENS: They're going to point to something 22 that specifies a minimum number of bytes. So, for example, if 23 the claim language were, I specify to Judge Gilstrap the 24 maximum speed he's allowed to drive home today, I say Judge 25

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Gilstrap can drive home no faster than 50 miles per hour, the analogy would be someone could come to you and say, No, no, no, no, no, you have 15 minutes to get home; that's the maximum amount of time; you need to drive at a speed -- you know, that's the minimum speed that you can get home. That's what we're going to see later in this case--that they're not going to point to something that is a max number of bytes; they're going to point to something that is a minimum number That's going to be the fight that we're going to of bytes. have here in a few months, and fear we're going to be right back in front of you with an 02 Micro fight.

Now, if counsel for the Plaintiff is willing to get up here and say, That's -- Mr. Stevens is crazy, he's wrong, you know, we're not going to point to anything that says max bytes equals a number, then maybe there isn't a fight, but if there's going to be a different interpretation in this case or a different argument that this claim is somehow satisfied by an entirely different parameter, I think we should hear that today. I think we should hear today what Plaintiff's position is going to be with respect to what it actually takes to satisfy this limitation.

We think it's very simple. Right? There has to be a message. The message must specify a maximum number of bytes of memory. If we all agree that that parameter must be specified in the message, then maybe we don't have a fight.

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But if there's going to be some other interpretation or some other definition offered, I do think that, as the Defendants, we believe we should be entitled to hear that today. THE COURT: All right. Well, let's go around the merry-go-round one more time. Having heard that, Mr. Davis, let me hear your response. I'm not sure how you specify a maximum number by specifying a minimum number, but go ahead and tell me what your reaction is. MR. DAVIS: I'm not either, Your Honor. And what I heard Mr. Stevens say is he wants to basically decide an infringement issue without any record of it, and he's -- he is assuming that we are going to be pointing -- what I heard him say is they're going to point to something that says 'minimum'. You know, I'm not sure what he's referring to, but the claim says 'maximum'. So it seems to me, like, if we're at the summary judgment stage and we're pointing to something that says 'minimum' and doesn't have anything to do with 'maximum', then, you know --THE COURT: You may be in a bad position. MR. DAVIS: We may be in a bad position. That's correct, Your Honor. And I just -- you know, I could take a stab at telling you our infringement theory on their product at this point, but I don't think that's the purpose of claim construction -- to

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pre-try or pre-judge or have Mr. Stevens try to pin us down on a very specific the message must say 'max bytes equals X' construction when that's not a construction they've proposed.

And the word says 'maximum'. And the example he said is they're going to point to something that says 'minimum'. don't -- that's not right, Your Honor. And so the claim language itself addresses Mr. Stevens' concern where the claim says 'blue' and we're pointing to something that's white. mean, if it's as binary and completely orthogonal as Mr. Stevens suggested, then, you know, that's -- I think that's a summary judgment issue and not a claim construction issue where they're proposing the exact same word that's in the claim.

And it's just -- it's really not appropriate to engage in -- to let the ultimate infringement question be litigated at the claim construction stage without a record of any of that.

That's our position, Your Honor. So we believe plain and ordinary is appropriate here.

THE COURT: Well, there's no dispute that both sides say plain and ordinary is appropriate. There seems to be some concern as to what plain and ordinary would be here. But I agree, at this point in the process I don't know how either the parties or the Court say 'max number of bytes equals X' must be a part of what is shown. Whatever is going to be

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shown is going to be shown, and if it specifies a maximum number of bytes of memory, then it's going to meet this limitation; and if it doesn't, it doesn't.

And, quite honestly, by the time we get to summary judgment, both sides are going to know what the other side's position is a lot better than they may speculate about it today. And if at that point the Plaintiff's position has something to do with something other than the maximum number of bytes, whether it's by saying you have this much time to get home, you can drive any speed you want to, rather than you can't go above 50 miles per hour, that's the kind of thing I would expect to take up and rule on at summary judgment.

So I'm going to decline the polite invitation from both sides to go beyond plain and ordinary meaning at this point. But I'll say this, especially in light of this discussion, I'll also decline any opportunity or invitation from either side to open an 02 Micro discussion post-summary judgment where one side or the other would have and should have and could have raised this issue then.

So it looks like to me I may well be revisiting this at summary judgment, but I'm happy to wait until summary judgment; just don't fail to raise it at all at summary judgment and then try to tell me in the middle of jury selection we've got an 02 Micro problem.

But with that, I don't think there's any other benefit to

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arguing this other than letting me apply plain and ordinary
meaning, and we'll take it from there.
                      Thank you, Your Honor.
          MR. DAVIS:
          THE COURT: Okay. Let me jump ahead for one thing,
counsel, so I don't overlook it, because it's quite clear
we're not going to get through every one of these disputed
claim terms for argument.
     Item 24 on our list looks like to me that there is really
no alternative construction proposed by Defendants, and,
consequently, I'm reading this as being effectively agreed to
be plain and ordinary meaning. Am I missing something here?
Is there a dispute on PTMTC, packet transfer mode transmission
convergence code words?
          MR. HURT: Christian Hurt for the Plaintiff.
     I assume Your Honor's referring to the numbering in the
Plaintiff's 4-3 chart?
          THE COURT: Yes.
          MR. HURT: Yes, Your Honor.
     Plaintiff's understanding is there is no dispute.
was initially a definiteness issue on this, and then
Defendants dropped the definiteness defense, and there was
never any counterproposal, and that's why that term was not
briefed and is not in the 4-5 chart either.
     So your understanding -- Your Honor's understanding is
consistent with Plaintiff's.
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THE COURT: That's how I came to ask this question. But Mr. Stevens, I'd like to hear from the Defendant on this. That's correct. We have withdrawn our MR. STEVENS: § 112 defense on that and agree with plain and ordinary meaning. THE COURT: Good. Then that answers that without waiting till we get there, if we get there. Let's go back to 'phase characteristics', 'each carrier signal has a phase characteristic associated with the bit stream'. Let me hear from the parties on this. We'll start with the Plaintiff. Go ahead, Mr. McAndrews. MR. McANDREWS: Thank you, Your Honor. So 'phase characteristic', this term -- this is something that would definitely cause an 02 Micro problem later in the The way this developed in Delaware is many years after the Court did claim construction, this term was raised. think it came up in part in a motion in limine in the pretrial order and in part on a request for reconsideration of a denial of a motion for summary judgment. The Defendant asked for a construction of this for the very first time. THE COURT: This didn't get addressed at claim construction. MR. McANDREWS: It did not get addressed at claim construction; it did get addressed about two to three months

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ago, Your Honor. We had a live claim construction hearing where Judge Andrews took live witness testimony from Dr. Vijay Madisetti and Doctor Zimmerman, who the Defendants are relying on in this case as well. And it's quite clear that what the Defendants want to do with plain and ordinary meaning is later on in the case they want to say, Well, because the way a phase characteristic is expressed by the source code in binary form, or something about it is not naturally -- would not naturally be considered a phase characteristic, so we'll take advantage of the fact that the jury is looking for something like an angle expressed in a number of degrees, juries don't understand radians, but potentially they'd be looking for something expressed in degrees or radians, and that's not the way computers talk to itself. Computers talk to themselves using digital bits, and those digital bits have a context and they mean something.

And so let me just jump forward to -- well, here's an illustration, Your Honor. I mean, this is what a phase characteristic is, if you were to illustrate it in the time It's simply a shifting of a sine wave in time. domain. you can think of a cycle of the sine waive as being divided up into 360 degrees, and then you can scroll forward and that represents a phase, and that phase can be represented in code in a number of ways. So I'm just showing a simple diagram here where we've gone forward 45 degrees in time, and that

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represents the digital bits 00; or I've gone back 45 degrees in time, which is the same as going forward 315 degrees in time, and that gives you the value 01.

It can also be illustrated in the frequency domain, and I'm showing here on the screen -- actually an illustration that comes out of a prior art DSL standard, the ANSI T1.413 standard, figure 22 of that. And what this shows is -- this tiny little diagram here actually shows multiple ways to represent a phase characteristic. So one way to represent it is you have an XY cartesian plane here, and so if you take -- and actually we've -- there's something called constellation points -- think of the stars in the sky, but these are divided up in a grid -- and each constellation point represents a phase and amplitude of a wave, and each individual constellation point represents a certain number of data bits.

So on the left-hand side we have the ANSI T1.413 standard, and what's showing is we have four constellation points that are labeled in decimal values here. We have 0 in the upper right-hand quadrant, and then counterclockwise we have 2, 3, 1. What I've done is I've made an illustration over on the right-hand side, because computers don't speak in decimal values typically, they speak in binary, and so what each of those decimal values is represented in binary, a 0 is 00, a 2 is 10, 3 is 11, 1 is 10. So those constellation

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points have been relabeled with how a computer would think about those constellation points.

The XY coordinates -- and this is one way, and Doctor Zimmerman agrees that this is one way to express a phase in amplitude characteristic is either XY, or it's also referred to as an INQ, but INQ bring in the idea of imaginary numbers, so most people think of these as XY coordinates. The idea is that if you have -- looking at the right-hand side, if you have an X with a 1 value -- and I've got a little slash there--and a Y of 1, so it's plus 1 plus 1 brings you to the If I want to get over to the 10, that would be minus 1 00. plus 1.

And then you can see that each of these has an angle associated with it. Right? But the way of expressing this phase characteristic can be any one of the things you see on the screen here. So on the next slide I've kind of summarized that.

So the way that you can express a characteristic is by the group of bits that represent -- that -- by the group of bits that are grouped onto a particular carrier. And I'll have a next slide to show what I mean by that. Because bits in a bit stream don't have a phase characteristic associated with them; it's when the bit scream is broken up into the constellation point, so there's -- for example, if you want -if you decide you want to have two bits per carrier, you have

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a two-bit constellation point. Once it's broken up into that group, it's now for a carrier, you know you have a particular phase characteristic. So you can represent a phase characteristic with the grouping of bits or you can represent it in any one of these other ways.

So one is the decimal values that we saw on the prior page, one is an XY pair, so plus one plus 1 or minus 1 plus 1. You can also represent it in, for example, 45 degrees or in radiance pi over 4. But the computer is not going use things like 45 degrees and pi over 4; they're going to use one of these other digital representations of the value.

So this is really a dispute over the way a computer expresses a value as opposed to over what a phase characteristic is. I think the parties agree that a phase characteristic is this -- if it's illustrated in the time domain, it's this offset in time by which you determine the information that you're sending and receiving. I don't think there's any dispute over what a phase characteristic is; the dispute is over how a computer will represent that phase characteristic.

And so the concern with plain and ordinary meaning is it leaves open a dispute that was resolved in Delaware. And in Delaware, the dispute was resolved by construction that was 'one or more values that represent the angular aspect of a...' and this is where we deviated from the Delaware construction.

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The Delaware construction, the way it differs from ours is rather than 'carrier signal', it's 'constellation point'. And the reason why we've made that change here, Your Honor, is we think that it's a little bit confusing because the constellation point itself -- and Doctor Zimmerman agreed with this -- the constellation point itself can represent the angular aspect.

So we didn't want it to be circular. What we're talking about is a phase characteristic of a particular carrier signal, because each one of them is going to have a constellation point; each one of them will have its own phase characteristic. And so we inserted the term 'carrier signal' rather than 'constellation point' because we thought it was a bit circular and potentially confusing.

THE COURT: You made the comment this was disposed of or dealt with in Delaware. I mean, this is out of claim 14 of the '008 Patent. The decision in Delaware arose with regard to the '660 Patent. That is really unrelated to the '008, but is related to the family 10 patents. correct? There wasn't an actual construction of this portion of the language from claim 14 of the '008 in Delaware, was there?

I'm sorry, Your Honor. There must MR. McANDREWS: be some confusion in the record because that's not true, that's not accurate, Your Honor.

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THE COURT: Well, that's why I'm asking questions. MR. McANDREWS: Yes. I'm sorry, Your Honor. And perhaps it's something in the way we -- perhaps we have a typo, but the decision that Judge Andrews recently issued in Delaware was certainly with respect to the '008 Patent and two other patents in the same family that used the same term. THE COURT: Okay. MR. McANDREWS: I believe it's the '627 and '048 Patent are the other two patents in the same family, family 4. It was certainly directed to the family 4 patents, Your Honor. THE COURT: Well, I may be mistaken, but that's why I wanted to get some clarity on that. Also it's clear that what we're talking about here comes from two different sections of claim 14. It's your view that the one construction that you put forward adequately addresses both of the sections of claim language that come from claim There's not a difference necessary between construing 'phase characteristics', which looks like it's on column 12, line 8 or 9, of the '008, and 'each carrier signal as a phase characteristic associated with the bit stream', which is in column 11, it looks like lines 44, 43. I'm not sure of the counting here. But obviously we've got different language from the same claim that is before the Court here, and I've got one proposed construction from the Plaintiff. Is there some distinction between these two sections of

claim language that would indicate something other than that one proposed construction's appropriate, in the Plaintiff's view?

MR. McANDREWS: No, Your Honor. So 'phase characteristic' or 'phase characteristics', just the plural of that, we're proposing the same construction. I think the additional term here that is referenced I guess only in the preamble, which is 'each carrier signal has a phase characteristic associated with the bit stream' --

THE COURT: Right.

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MR. McANDREWS: That would -- other than the word 'phase characteristic', the rest of that term would take on its plain and ordinary meaning. I was prepared to explain what that meant. I'm not certain that there's any -- it's all subsumed in the word 'phase characteristic' and how a phase characteristic is expressed; it's not this issue of association, although I was prepared to just briefly describe that, if Your Honor is interested. And I think that the discussion of how the phase characteristic is associated with the bit stream will provide clarity to a term that's coming two down from now, 'same bit value'. So if Your Honor would indulge me, I'll just mention that.

> THE COURT: That's fine.

MR. McANDREWS: This is an illustration essentially of a bit stream, and then this is a showing -- this is showing

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the association of those bits, first of all, with the carrier And then, as I mentioned before, once the grouping of bits becomes associated with a carrier signal, that begins to represent the phase. So the phase -- once the grouping of bits occurs, you can represent the phase using the value of the group of bits. You can represent it in any other manner. So this illustration here shows the bit stream. It shows you take -- you snip off two bits of that bit stream, and you decide that using something called a bit allocation table. The bit allocation table can decide how many bits you want to put on a carrier. Here we're showing an equal number of bits on every carrier, although the whole idea of DMT is that you -- depending on your signal, the noise ratio available on each carrier, you load a different number of bits. But to simplify the discussion here, I'm showing a bit allocation table that puts two bits on every carrier. Each one of those two-bit groupings is now a constellation point. It has a phase characteristic associated with it. I'll stop here on this point. I'm going to come back to a similar discussion, though, for 'same bit value', but just let's keep this in mind for a couple of moments from now. But unless Your Honor has any further questions about 'phase characteristic', I'll rest on that. THE COURT: Well, I assume you'd agree with me that 'phase' is a well-established term of art; that there's not

something new or novel about the word 'phase' here.

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MR. McANDREWS: Nothing, Your Honor. And we're not attempting to import anything novel about the way a phase is represented in a device either.

THE COURT: Okay. Tell me why you're proposing 'carrier signal' instead of 'constellation point' in what you've proffered here.

MR. McANDREWS: Yes, Your Honor.

So if I can go back to this screen here, and this is something that was -- well, it was disputed in Delaware, but the way this was characterized is the top four columns here -- I'm sorry -- the top four rows here would be characterized as a constellation point. The bottom two rows would not be considered a constellation point because they leave out any concept of amplitude, and a constellation point has both a phase and an amplitude. Constellation point, if we look back here, there is an angle of rotation off of the X axis, that's an angle, but the amplitude is the distance from the origin. You know, there's Pythagorean theorem, or something, by which you get that distance. But that becomes the amplitude.

So when we -- so when we express a phase characteristic using what is also considered a constellation point, the construction that the Delaware court arrived at, 'one or more values that represent the angular aspect of a constellation point' becomes a little confusing because maybe you're looking

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for something different than the constellation point when, in fact, the constellation point itself represents the phase characteristic.

I'm not sure it's a problem, Your Honor; it was a little bit confusing to us, and we wanted in the idea that this is per carrier; you know, each carrier has its own unique phase characteristic; you know, not unique in the sense that it's necessarily different from one to the other, but it is it's -- it's its own phase characteristic.

So we wanted -- first of all, we wanted to issue of 'carrier signal' in there, and we were concerned that there would be some circularity to referring back to the constellation point.

It's not critical. We think that ultimately, you know, our expert is capable of explaining how a constellation point itself represents the angular aspect of the constellation point. I'm not sure that there's going to be -- well, I'm certain there's going to be debate over that, but we -- I guess what I'm saying is we wouldn't have too much trouble with sticking with the Delaware construction, but we do think that there is a little bit of confusion when you are talking about the constellation itself representing its angular aspect.

THE COURT: All right. What else?

MR. McANDREWS: That's it on the term 'phase

characteristic', Your Honor. 1 THE COURT: Okay. Let me hear from the Defendants. 2 MS. DONALD: This is Katherine Donald on behalf of 3 the Defendants, Your Honor. 4 THE COURT: Go ahead, Ms. Donald. 5 MS. DONALD: I think I can streamline this dispute. 6 The Defendants' construction does not provide more clarity 7 because it only represents encoding bits to a constellation 8 map, which the plain language of the claim does not 9 contemplate. And as shown here in the specification, this 10 invention is not related to only OAM modulation and, as a 11 result of TQ Delta's construction, it only injects more 12 ambiguity into the claim language than it solves. 13 For instance, as Mr. McAndrews just alluded, they're now 14 going to have to have each party put forth an expert just to 15 16 clarify what an angular aspect can mean in the context of 17 other modulation schemes. In addition, it's going to confuse the jury by requiring 18 each party to put forth an expert to explain that the jury has 19 to look for something other than searching for an angle. 2.0 21 And finally, Your Honor, as TQ Delta's expert has alluded, Doctor Madisetti, there are various ways in which a 2.2 phase characteristic can be expressed. And because of this, 23 we ask that you give the well-known term of the art's plain 24 ordinary meaning. 25

THE COURT: What's your problem with the 1 construction that emanated from Delaware? 2 MS. DONALD: Your Honor, the parties in Delaware 3 were arguing about limiting the claim language to QAM 4 modulation, and the plain language of the claim is not limited 5 6 to QAM modulation. If you're going to have one or more values that represent the angular aspect of a constellation point, 7 that's going to be specifically to QAM modulation and not to 8 what a phase characteristic is understood to someone in the 9 art. 10 11 THE COURT: What assurances can you give me that if I adopt a plain and ordinary meaning, we won't have a problem 12 down the road with 02 Micro here? 13 MS. DONALD: Well, Your Honor, as Mr. McAndrews 14 alluded, part of their construction is based on potential 15 16 future infringement positions, and so I think at this point if 17 you take the plain language of what a phase characteristic is, which a person of ordinary skill in the art often knows is a 18 position of a point in time, I don't think there is going to 19 be a further 02 Micro dispute until we reach that issue. 2.0 21 THE COURT: Okay. What else do you have for me on this? 2.2 MS. DONALD: Nothing, Your Honor. 23 THE COURT: 24 Okay. MS. DONALD: Thank you. 25

MR. FINDLAY: Your Honor? 1 THE COURT: Yes. 2 MR. FINDLAY: Eric Findlay. 3 Very briefly, may a counsel that is not required be 4 permitted to quietly leave the courtroom to use the 5 6 facilities? I know we're trying to rush, but I've gotten a look from somebody that I think he had too much coffee in the 7 morning and might need to take a quick break, if it's all 8 right with the Court. 9 THE COURT: Well, without getting more explicit on 10 the record, Mr. Findlay, why don't we take a five-minute 11 recess, we'll come back, and then we'll pick up where we left 12 off. 13 Court stands in recess. 14 (Brief recess.) 15 16 THE COURT: Be seated, please. 17 Before we move on, let's go back to the preceding claim terminology, particularly 'phase characteristic/ 18 characteristics'. 19 The only thing that I've seen emanating from Judge 2.0 Andrews on this is effectively a one-page order adopting this 21 construction. I don't see any real analysis there. 2.2 understand the Delaware court's practice sometimes is to issue 23 a separate opinion from a separate construction order. I 24 don't know if there is a separate opinion that puts forward 25

his actual analysis as to how he reached this construction. 1 If there is, it would be beneficial for me to have an 2 opportunity to look at that. And it appears, from what I can 3 tell on the docket there, that the transcript from the 4 argument that related to this one-page order is sealed on the 5 docket there, so I don't have access to that either. If there's something the parties can provide me here by 7 way of the underlying analysis, either from a copy of the 8 transcript that both sides could agree to ask the Delaware 9 court to unseal that you could share with me, or a separate 10 order setting forth his analysis rather than just the one-page 11 entry that adopts this construction, that would be helpful. 12 And to the extent both sides can meet and confer and come up 13 with a way to give me something else than what I have, I'd 14 appreciate it. 15 16 Mr. McAndrews, you're on your feet. 17 MR. McANDREWS: Yes, Your Honor. May I address that just momentarily? 18 THE COURT: Certainly. 19 MR. McANDREWS: And I have the next term as well. 2.0 Your Honor, Judge Andrews did provide a detailed 21 analysis, but he did it orally on the record, and then the 2.2 very brief order came out after that. But he addressed his 23 analysis immediately following the conclusion of the live 24 testimony. 25

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THE COURT: Would it be possible for both sides to jointly ask the Court to unseal that portion of it for the purpose of sharing it with me? MR. McANDREWS: Yes, Your Honor. At a minimum, we'll make sure that we can share it with you, or we'll do our best to redact anything that somebody thought might have been confidential about that hearing. THE COURT: Defendants have any problem with that? I would only point out, Your MR. STEVENS: No. Honor, that Nokia is not involved with that. So it would be nice if it's unsealed for you, we'd like to get a copy of it as well. THE COURT: Well, I'll leave those discussions to everybody who's represented here in the room. My basic point is I haven't had the benefit of Judge Andrews' analysis on this and I'd like it. If it comes from the transcript, fine; if it comes from some separate opinion as opposed to his actual issued order, fine; but based on Mr. McAndrews' statement, I assume just the section of the transcript where he announced into the record the reasons behind the adoption of this construction would be beneficial to me. And I'd like to get it as quickly as possible. I don't want that to become an impediment to me getting an opinion out in this case. So I'll leave the rest of the process up to you-all, but if you-all will work together and try and get me that, fine.

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If you have some problem with that, I'm happy to talk to Judge Andrews and see if he'll deal directly with me on it, but it would probably be more appropriate for you-all to raise that with the court there and communicate to the court there that this Court has expressed a specific desire to see and have the benefit of his analysis. Okay? MR. McANDREWS: Yes, Your Honor. THE COURT: Okay. All right. Let's go on to 'substantially scramble, the phase characteristics of the plurality of carrier signals'. Since you're at the podium, Mr. McAndrews, why don't you give me Plaintiff's view on this. MR. McANDREWS: Yes, Your Honor. So this is a rehash of the dispute in Delaware, although I think in Delaware the Defendants took the position that the term was indefinite. They -- you know, because occasionally a term like 'substantially a matter of degree' can be viewed as potentially indefinite if the specification doesn't tell you how to measure what is 'substantially'. In this case the patent specification does, in fact, do There are a number of places in the patent specification where it describes what it means to substantially scramble a signal, and that is that it is substantially scrambled when there is a reduced

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peak-to-average power racial, PAR, which is one of the issues addressed by the family 4 patents is reducing the PAR of the transmission signal.

I don't think we need a long, detailed explanation of the technology behind that, but we see here in the patent specification, both in the abstract and a couple of times during the course of the description, that the term 'substantially scramble' is equated with 'reducing peak average power ratio'.

Now, the Defendants have a concern with this term because they say that it's merely claiming a result, and that's actually not -- it's not true as an initial matter. I'll separately address whether it's appropriate to describe what could be characterized as a result in a claim construction or even in a claim. But this actually includes the term 'adjust the phase characteristics of the carrier signals by varying amounts', so that's something that is actually describing functionality; and then it's 'to produce a transmission signal with a reduced peak-to-average power ratio'.

'To produce a transmission signal with a reduced peak-to-average power ratio' is describing -- is further enhancing and describing and limiting the 'adjust the phase characteristics of the carrier signals by varying amounts'. It is not merely claiming a result in the absence of the functionality to support that in the claim, and that's why we

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believe that the claim construction is appropriate in this instance.

If we were to leave this simply as plain and ordinary meaning, I'm very concerned that later on we're going to have an *O2 Micro* problem; possibly not on infringement, I'm speculating here, but more likely on prior art where they're going to point to something that doesn't substantially scramble a signal and say, Well, there's some aspect of scrambling and we're going to characterize that as substantial.

So we believe that the district court in Delaware looked at this term, considered whether it was definite, and considered the totality of the construction and determined that 'adjusting the phase characteristics by varying amounts' was appropriate and to describe further what that accomplishes.

So this is not necessarily something that comes from the plain and ordinary meaning of the term; it comes from the patent specification defining what is meant by 'substantially scramble'.

And unless you have any questions, I'll turn it over.

THE COURT: The Defendants seem to say in what I've read there that the Delaware court improperly imported functional language from the specification.

Is there anything in response to that that you need to

tell me that you haven't already said? 1 MR. McANDREWS: No, Your Honor. 2 THE COURT: Okay. All right. Then let me hear from 3 the Defendants. 4 MS. DONALD: This is Katherine Donald again on 5 6 behalf of the Defendants. Your Honor, the dispute here is different because in the 7 Delaware litigation both the parties were arguing about what 8 the actual intended result was, whereas here we're arguing 9 that it's improper to import the intended result into the 10 claim language when the claim language clearly does not 11 contemplate 'producing a transmission signal with a reduced 12 peak-to-average power ratio'. And this is the best evidenced 13 by the claim language itself, which is highlighted in pink on 14 the left and also by the part of the specification which the 15 -- TQ Delta does not cite to. 16 17 The phase scrambler combines the phase shift computed for each carrier signal with the phase characteristic of that 18 carrier signal, and that is what it means to substantially 19 scramble the phase characteristics. And because the claim 2.0 language is not -- and because reducing the PAR value is not 21 inherent in the claim language, TQ Delta has to import that 2.2 intended result into the meaning. 23 And, Your Honor, on the next slide, what is illustrated 24 as figure 2 of the patent specification, and here this is just 25

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one embodiment, but my point is simple. At step 115, you have the computing the phase shift. At step 120, you have combining the phase shift with the phase characteristic. This is exactly what the claim language says and what the specification contemplates. And at this point where the red arrow is indicating is that you have substantially scrambled the phase characteristics.

And as this diagram goes on, at step 130 you're going to combine the carrier signals to produce a linear transmission signal, and at this point you'll be able to see whether or not the PAR is reduced. And, in theory, the PAR could actually increase.

And so, Your Honor, another part of evidence in the intrinsic record that supports our argument is the related patent, U.S. Patent No. 7,292,627. It is a parent patent to the '008 Patent. And on the left-hand side I've taken claims 1 and 2, and on the left-hand side I've highlighted almost identical language to our asserted patents on the right-hand side. However, in the parent patent, the patent had a dependent claim which reduces the peak-to-average power ratio as a result of substantially scrambling.

And so our argument is simple, Your Honor. They're importing an intended result which may or may not happen, and it's improper to do that.

THE COURT: All right.

MS. DONALD: Is there anything further, Your Honor? 1 THE COURT: No. I think I understand your argument. 2 MS. DONALD: Okay. Thank you. 3 THE COURT: Thank you. 4 All right. Let's go to 'same bit value', and we'll also 5 6 take up the 'multiple carrier signals corresponding to the scrambled carrier signals that are used by the first 7 multicarrier transceiver to modulate the same bit value'. 8 And this will probably consume the rest of the allocated 9 time that the Court set aside for oral argument this morning. 10 Go ahead, Mr. McAndrews. 11 MR. McANDREWS: Thank you, Your Honor. 12 THE COURT: Defendants are telling me this is 13 indefinite. Why is that not right? 14 MR. McANDREWS: Right. So, Your Honor, so 'same bit 15 16 value' is being interpreted, and that's really the word that 17 drives both of these -- that's the phrase that drives both of these terms. So there's nothing different about the remainder 18 of that other term other than its plain meaning that we're 19 advocating. 2.0 But -- so 'same bit value', it was interpreted in 21 Delaware to mean 'value of the same bit'. The analysis there 2.2 was, as it is here, the Defendants really haven't presented 23 any new argument. They argue that there are two ways to 24 interpret that. One of them is that two bits and one each 25

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assigned to a different carrier would just happen to have the same value. And what they say about that and they admit about that, the absurdity of that is that if you have -- if you're sending one bit values and if you have more than two carriers, well, because you only have two choices of a bit value, carrier one, for example, has a 1 on it; carrier two has a 0, carrier three happens to carry a 1 again, now they're saying that the claim is automatically met when, in fact, there's nothing interesting about that. There's no reason to claim that. There would be nothing -- there is no -- nothing novel about that if we have -- if where he merely happen to have the same value that goes on multiple carriers.

Instead, what the patent specification is describing is where -- it's this situation here, Your Honor. So this is a modified -- slightly modified version of the figure I showed earlier where we had a first group of bits assigned to carrier one, a second group of bits going to carrier two, the third group of bits went to carrier three, and the fourth group of bits went to carrier four. But even in that instance -- so let's -- and I apologize. I'm going to scroll back here a little bit and describe essentially what Defendants' position is. There we go.

So their position would be that even though the second grouping of bits in blue, 01, are not the same bits as the orange group of bits, 01, they just happen to be the same,

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and, therefore, we have values on two different carriers that happen to be the same, when, in fact, what the patent specification describes -- and their expert witness Doctor Zimmerman admits this--that it's all over the patent specification in terms -- the intrinsic record. It's in the provisional application, and they agree that it's described in the patent specification that there's this concept of taking the same bits and putting their value on two different So it's showing here that the first grouping of carriers. bits actually gets copied onto carrier one and carrier three. That's the concept that the patent specification is describing. And I don't think there's any dispute that the patent specification is describing that embodiment. The dispute is over their belief that 'same bit value' means the first thing or the second thing. But in view of the patent specification, in view of what the inventor was describing as what was different about this than just standard old modulation where you might by happenstance have values that are the same on multiple carriers, he's describing where multiple carrier signals are actually used to modulate the same bit value. And we believe that that is best interpreted as 'value of the same bits' as opposed to just happening to be the value. And Defendants point out that the patent specification when -- the patent specification and the provisional

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application use 'same bit', they say it doesn't use 'same bit value', and that's their concern about the specification using a different word than the claim, but the claim is actually more accurate, because you don't modulate a bit position. You're not telling the other side, Hey, this bit came from the third position. You have to modulate the value. The value has to be -- is what is modulated. And so by saying 'same bit value' doesn't mean this is just any value; it still has to be from the same bit. So it's the same bit, but it's a value that gets modulated. The bit itself, you know, some empty place that could hold anything you want it to hold, is not what gets modulated. THE COURT: Didn't you argue in Delaware that 'same bit value' referred to 'bit position' rather than 'value'? Are you arguing something different here than you argued there? MR. McANDREWS: You know, we're not, Your Honor, and this is kind of -- this is a false dichotomy that was set up in the response brief. 'Bit position' -- the reason why 'bit position' was being addressed in Delaware is it was talking about the value that resides in a particular position. So if -- looking at the screen here, bit position 1 has a 0 in it. Bit position two has a 1 in it. Bit position three has a 1 in it. Bit position four has a 0 in it. The idea is that it's those same -- it's the value that comes from that bit position

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that is modulated on to multiple carriers. The bit position itself isn't what goes on there. So there's a little bit of confusion here.

We have been consistent I believe, Your Honor, in arguing -- so, first of all, they're not two different things. To say 'bit position' versus 'value of the same bit', they're not the same thing. We intended them to mean the same thing in the sense that it's the value that comes from a particular bit position that goes on to multiple carriers. So it's the value of the same bit that goes onto multiple carriers. So we didn't intend them to mean different things.

Defendants' responsive brief, for some reason they set up this false dichotomy, and I think they actually said that we argued something other than 'value of the same bit' in Delaware. I mean, that was what we proposed and that's what Judge Andrews adopted was 'value of the same bit'.

It just -- and understandably, there can be some confusion here, but the way to explain it best by an expert would be to say you take the bit from position one and copy that on to two carriers. It's not by happenstance that bit position one and bit position four are 0s and they wind up on different carriers. That's not what the claim is talking about. The claim is talking about taking the value from the same bit position and copying it onto multiple carriers.

THE COURT: Okay.

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MR. McANDREWS: So we think that the specification makes it clear what the inventor intended as his invention. 'Same bit value' is best clarified for purposes of resolving this dispute as 'value of the same bit'. THE COURT: Thank you. Let me hear from Defendants on this. MR. HAYNES: Thank you, Your Honor. John Haynes for Defendants. THE COURT: Go ahead, Mr. Haynes. MR. HAYNES: We just heard recognition that this claim is confusing, and that is the problem. Now, they may have wished they had drafted a claim that said 'mapping the same bit to multiple carriers', but that's not what they wrote down in the claim. In this claim they said 'same bit value', and there's only two possibilities for that value--1 or 0. 'Same bit value' means you're taking a 1 or a 0 and you're mapping it to multiple carriers. That's one possible interpretation. Now, we don't disagree that what he just described is also a possible interpretation, and the problem we have is the spec doesn't tell you which is correct. You don't know with reasonable certainty whether 'same bit value' is talking about a value of a 1 or a 0 or whether it's talking about a specific bit in that chain. So there are two possible interpretations here and

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they're both reasonable, and the spec actually supports both and I'll show you where that is. And when you're in that situation, it's not your job to try to rewrite the claim to make it what the inventors may have intended from their invention. The question is what does the claim say, and can a person of ordinary skill in the art reading the specification determine which of these two things is correct.

So let's talk about the first interpretation, and this is the question of 'same bit value'. If you look at those words, the value in this system is a 1 or a 0. Nobody disputes that. And one of the problems that the patent explains is that when you have a system where you're mapping all your points to a 1 or a 0, you end up with this situation where you have too many 1s and too many 0s, and that causes this peak-to-average power ratio problem.

And so one way you can cause it under the first interpretation is if you end up with bunch of bit streams get mapped to carriers, and it happens that you've got 1s straight down the line. Now you're modulating a whole bunch of 1s and that's going to cause a peak-to-average power ratio problem, and that's what the spec identifies as one possible problem--you don't have enough variance in your mappings. And when you don't have enough variance in your mappings, you know, different values. Right? You're not mapping to .1, .2, .3, .4, .5, and then you run into this problem. And so their

solution to that problem is this phase scrambler.

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So that's one reasonable interpretation—that the 'value of the same bit' means exactly what those words say, or the 'same bit value' means exactly what that says, which is a 1 or a 0, so you're mapping a 1 or a 0 to multiple carriers.

That's one of the problems they identify.

The second interpretation is the one that Plaintiff's counsel just explained, which is you have the situation where you have the input bit stream and you essentially map the same bit to multiple carriers, and because you're mapping the same bit, that bit also has a value of a 1 or a 0, but in this instance you're actually taking that bit and putting it on multiple carriers. That also causes a PAR problem. Right? And you need scrambling to fix that.

And that's the construction they say you should write into the claim, is that 'same bit value' means 'value of the same bit', which I took from the discussion today they're basically saying means 'same bit'. The problem is the claim doesn't say 'same bit'; it says 'same bit value', and it's those words that create this ambiguity.

And when you have that ambiguity, two reasonable constructions of the same term in light of the specification, that means the claim is indefinite. He wants you to resolve that ambiguity based on the intent of the inventor, but the spec supports both. And if you look in the briefing, when it

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talks about a bit value, it always talks about one of two It either talks about a 0 bit value or a 1 bit value. And we looked at that language a second ago. Right? places where it talks about bit values, it says 0 value for a data bit corresponding to 90 degrees or a 1 value for a data bit corresponding to minus 90 degrees. Now, in terms of Plaintiff's proposed construction of 'value of the same bit', it doesn't solve the ambiguity. If you have a construction that says 'value of the same bit', I don't know, am I talking about the fact that it happens to be a 1--that's the value of the bit--or am I talking about the fact that it is the same bit, which means the same bit position and the value of the bit in that position? And there's nothing in the claims or the spec that allows me to look at that term 'same bit value' and choose between them, and that's a problem. It is confusing. You heard Plaintiff's counsel say multiple times, "This is confusing." A person of ordinary skill in the art reading this patent is going to be confused. It is not going to -they will not know with reasonable certainty which of these meanings was intended, and that means it has to be indefinite. THE COURT: All right. Anything further from the Plaintiff on this? MR. McANDREWS: No, Your Honor. I did want to point out, and I should have said this --

THE COURT: Go to the podium, please. 1 MR. McANDREWS: I'm sorry. 2 I should have pointed this out when I first came up. 3 There was some typographical errors that occurred in our 4 construction. What happened is when the Plaintiff's proposed 5 6 a construction for this particular term, we accidentally pulled a construction for a 'demodulate' term from the 7 Delaware district court decision on the family 4 patents. 8 pulled it from -- and I believe it's the '048 Patent addresses 9 essentially descrambling a signal rather than scrambling a 10 signal, and so it talked about receiving the same bit value. 11 And I think what we ought to do, and if you could pull 12 this up, this right here shows the mistake that was made. 13 This is actually the way that our construction needs to be 14 It accidentally addressed 'demodulating' and the modified. 15 'received bit stream' rather than the way it should have been, 16 17 which is -- well, I guess I didn't repeat -- what remains after this redline is what the proposed construction should 18 have been. 19 I believe the Defendants recognized this as an error, and 2.0 so I don't think there's a point of contention over this. 21 Their witness actually -- their expert witness actually 2.2 commented that it looked like we made a mistake and we 23 intended to say 'modulate'. And it would have been on the 24 transmitter side. 25

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So I just wanted to point this out that we didn't intend to give a 'received' definition for what's going on at the transmitter, which is 'modulating', not 'demodulating'. THE COURT: Okay. I appreciate that. It would have been nice to have that earlier, but better late than never. MR. McANDREWS: Sorry about that, Your Honor. noticed it last night. THE COURT: Mr. Haynes, I'll give you the last word on this. MR. HAYNES: If we could bring the last slide up, the one you had just now. Yeah. The change to their construction that -- they did give us notice of this last night, Your Honor, and we weren't sure whether they were going to propose it or not. The change in the construction actually makes the ambiguity worse because now we're talking about the value of a bit and they've deleted that the bit is of the received bit stream. That creates even more ambiguity of whether I'm talking about just a value of 1 or a 0, because now I'm removing myself even further from the notion of same bit. And again, this change and the fact that they focused on 'demodulating', when you look at the Delaware court's argument and the discussion in Delaware, they were very focused on this 'demodulation' term. And if you look at Judge Andrews'

reasoning, he explains that -- and adopted this construction

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because he viewed this as, I'm demodulating the same thing that I modulated on the other side, and that was his reasoning why it needs to be a 'value of the same bit'.

That resolution, however, doesn't really address the problem we're talking about, which is when you're talking about 'modulating', are you modulating a 1 because it is the same bit, or are you modulating a 1 because that is the value of the bit that has to be on two different carriers. So Judge Andrews' reasoning doesn't actually address the problem.

We agree that if you put a 1 on the left, you're going to demodulate a 1 on the right, and the transmitter -- if you transmit a 1, you're going to try to demodulate a 1 on the receiver. But that doesn't resolve the issue. The issue is, is the 1 I'm putting there a 1 because it's the same bit --

THE COURT: I know. We're back to your same argument.

MR. HAYNES: Thank you, Your Honor.

THE COURT: I understand. Thank you.

Counsel, that consumes all the time the Court's allocated on oral argument on these claim construction issues this morning, or I guess it's this afternoon now. The remainder of what's in dispute that's been submitted the Court will take up and address on the papers.

These matters are under submission. I'll attempt to get you some written guidance by way of a claim construction

opinion as soon as practical. I would like for you-all to act 1 promptly and see if you can get me that additional analysis 2 from Delaware that I asked for. 3 Those are all the matters that I have set this morning. 4 Is there anything that either side needs to raise with the 5 Court? As I mentioned to you in chambers, I will get you a 6 written order on the clarification as to the Court's order on 7 narrowing, and I addressed that with you off the record in 8 chambers, but I'll get you a written order on that shortly. 9 If there's not anything further, as I say, these are 10 under submission, the Court stands in recess, and you're 11 12 excused. (End of hearing.) 13 14 15 16 17 18 19 2.0 21 2.2 23 24 25

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